Kant and the Concept of Cognitive Finitude

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Declaration and Inclusion of Material from a Prior Thesis

I can confirm that the work enclosed is my own.

I used an essay I wrote during my first year of the MPhil (2017-2018), named ‘Nonconceptualism vs Conceptualism: Classical Nonconceptualist Theory and the Problem of Synthesis’, as the basis for my discussion in the ‘Nonconceptualism and Synthesis’ chapter.

Otherwise all material is completely new.

Abstract

The purpose of this dissertation is to investigate the concept of cognitive finitude, insofar as it is articulated in the opening chapters of Immanuel Kant's *Critique of Pure Reason*. The analysis of this concept involves an in-depth study of the limits of each element of human cognition, chraracterised by Kant as sensibility (the faculty of intuitions) and the understanding (the faculty of concepts). The limits which pertain to the former are formulated in the first part of the Transcendental Doctrine of Elements, the Transcendental Aesthetic. The limits which pertain to the latter are formulated in the major sections of the subsequent Transcendental Analytic, referred to as the Metaphysical Deduction and the Transcendental Deduction. Special care is paid to the Metaphysical Deduction, insofar as it is there that Kant argues for the necessity of conceiving of the pure concepts of the understanding as they are listed. Due to the extent Kant revised portions of his text in the B-Edition (published six years after the original), a substantial degree of comparative work is necessary, to properly explicate the nuances of Kant's complex theory. Once the bulk of the exegetical labour is done and a concept of cognitive finitude is at hand, we will update our investigation with reference to a contemporary debate taking place amongst the Kantian community. This debate revolves around the terms 'conceptualism' and 'nonconceptualism'. Though the 'first-wave' nonconceptualist argument concerning the status of a para-conceptual synthesis seems to have been disproved, a newer argument has been employed to insist upon the necessity for a nonconceptual, sensible unity. This argument trades in the currency of infinity, insofar as Kant seems to suggest that we are 'given' infinite spatio-temporal magnitudes. We reject this argument, and thereby re-affirm the relevance of cognitive finitude in Kant's *Critique*.

Part I

Introduction

On the opening page of the second edition of the *Critique of Pure Reason* (*Kritik der Reinen Vernunft*, 1787), Immanuel Kant appended a quote from the medieval philosopher and scientist Francis Bacon. This epigraph is Kant's dedication to Bacon – it is taken from Bacon's *New Organon* (*Novum Organum Scientiarum*, 1620) and refers to the 'Great Instauration', a lifelong project of Bacon's that aimed "to reform natural science into practical philosophy."[1] The quote closes with the following statement of purpose: "each may well hope from our instauration that it claims nothing infinite, and nothing beyond what is mortal; for in truth it prescribes only the end of infinite errors, and this is a legitimate end" (Bii). For anyone that has read Kant's magnum opus, the import of Bacon's quote is perspicacious, for Kant's domain is the finite and finitude. The subject is limited, and has access only to what its constitutive limits will allow. Kant conceives of his project in a juridical fashion: by deducing the transcendental conditions of cognition, he legislates for the proper domain of science. Thus Kant's aspiration is to

> institute a court of justice, by which reason may secure its rightful claims while dismissing all its groundless pretensions, and this not by mere decrees but according to its own eternal and unchangeable laws; and this court is none other than the critique of pure reason itself (Axi-xii).

The purpose of this dissertation is to discuss the role that finitude plays in the opening chapters of Kant's *Critique*. Specifically, we will discuss the concept with relation to how Kant configures cognition. Kant relies on the term heavily, though his use is not always uniform. Most minimally, cognition equates to thinking. Yet we must distinguish between thinking (*Denken*) and cognition proper (*Erkenntnis*).[2] Cognition is not a fleeting mental impression; cognition is thought in its most advanced and sophisticated manifestation. Cognition entails mental propositions of a determinate object: it is intentional, a thought of or about X. At B146, Kant states: "To think of an object and to cognise an object are thus not the same. For two components belong to cognition: first, the concept, through which an

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[1] Brett Fulkerston-Smith, 'Francis Bacon' in *The Bloomsbury Companion to Kant*, eds. Gary Banham, Dennis Schulting & Nigel Hems (London: Bloomsbury, 2015), 124.

[2] See the entry on 'cognition' in Howard Caygill's *A Kant Dictionary*, (Oxford: Blackwell Publishing, 1995), 113. For the distinction between cognition and knowledge, see Anil Gomes, 'Kant, the Philosophy of Mind, and Twentieth-Century Analytic Philosophy' in *Kant and the Philosophy of Mind*, eds. Gomes & Stephenson (Oxford: Oxford University Press, 2017), 7-8; Chong-Fuk Lau, 'Kant's Concept of Cognition and the Key to the Whole Secrete of Metaphysics' in *The Palgrave Kant Handbook*, ed. Matthew C. Altman (London: Palgrave Macmillan, 2017), 117-119.

object is thought at all (the category), and second, the intuition, through which it is given." Given the nature of cognition, in many instances of Kant's *Critique* one could substitute the term with another, 'experience', and the sentence would remain intelligible. Both are grounded in the fundamental duality at the centre of Kant's philosophy. On the topic of this duality, P. F. Strawson writes:

> If any item is to enter our conscious experience we must be able to classify it in some way, to recognise it as possessing some general characteristics. To say that we must have general concepts in order for empirical knowledge to be possible is just to say that we must have such recognitional abilities as these. No less evidently, if these abilities are ever to be exercised, we must have material on which to exercise them; particular instances of general concepts must be encountered in experience. The importance of this fundamental duality is fully recognised by Kant.[3]

To paraphrase Strawson's analysis of Kant, we can say that on the one hand the subject *thinks*, which is to say that the subject has the capacity to determine objects through the employment of concepts, and on the other hand the subject *senses*, which is to say that the subject has the capacity to receive intuitions through the organs of sense-experience. If the subject thinks an object presented to him through sense-experience, his mental activity qualifies as cognition. Given this definition, cognition is clearly a prerequisite for knowledge: "we can think of cognition as involving the mind's being determinately related to an object… where standing in such a relation to an object is a necessary condition of having propositional knowledge about the object."[4] The consequences of the fundamental duality, established by Kant at the beginning of his *Critique*, will preoccupy this dissertation's discussion of cognition.

What is Finitude?

A definition of finitude, despite the canonicity of the term, is surprisingly difficult to come across – it is not to be found in the *Routledge Encyclopaedia of Philosophy* (1998), the *Macmillan Encyclopaedia of Philosophy* (2006), nor even in the superb *Cambridge Dictionary of Philosophy* (1999). Perhaps this absence means that it doesn't really require a lengthy explanation – after all, finitude is simply the characteristic of being-finite. In this basic sense, one can speak intelligibly about the 'spatial finitude' of a room, or the 'temporal finitude' of a film's duration, and so on. Of course, one immediately suspects that the being-finite of these examples is unproblematic because the capacity the attribute of finitude is applied to – extension and duration respectively – is well-defined, that is, specific or narrow in range. By contrast, the concept of *human finitude* heralds a host of contentious issues, insofar as the human

[3] P. F. Strawson, *The Bounds of Sense* (London: Routledge, 2006), 20.
[4] Gomes, 'Kant, the Philosophy of Mind, and Twentieth-Century Analytic Philosophy', 8.

subject has many capacities, many powers, and most lack the descriptive simplicity that pertains to extension and duration. True, the physical finitude of the subject (which relates, not quite seamlessly, to its biological finitude) is relatively unproblematic – like my old London flat, I can readily conceive of the inherent limitations of size and strength that the phrase conjures up – but the ease with which I think the former evaporates when it comes to conceiving man's artistic finitude, emotional finitude, or political finitude.

In our case we are concerned with cognitive finitude, or the finitude of the Kantian subject's capacity to think determinately. The most obvious form an analysis of cognitive finitude can take is to establish the *limits* of cognition. After all, if something is finite, this is tantamount to saying that it has limits. Speaking of the *cognoscendi* (the ground of knowledge), Descartes says if "I consider the faculty of understanding, I immediately recognise in me it is very small and seriously limited."[5] But what are limits? This is difficult to say exactly – it seems easier somehow to say what limits *do*: a limit restricts. That is, a limit is not a *thing*, but insofar as a limit applies to a certain thing, the limit represents the final point of application or extension of whatever that thing is. Perhaps most accurately, a limit establishes the boundary between the thing's possibility and impossibility. G. W. F. Hegel, an heir to Kant in many ways, is particularly illuminating on the logical character of limits. According to him, a thing's limit both separates it from other things – "the limit is the non-being of the other" – and makes it what it is – "through the limit something is what it is, and in the limit it has its quality."[6] That is, what Hegel makes apparent is that the concept of a limit has two functions: "Something limited, for Hegel, is something of its *own* in *not*-being-another; it is both positive and negative – a meadow as not-wood."[7] That is, on the one hand the limit is negative: it marks the place beyond which the thing cannot go, and thus points to and denies what it is not, e.g. I am limited insofar as I am not able to be a dog, or a cloud, or another person entirely. On the other hand, the limit is positive: it makes the thing what it is, and nothing else, e.g. I am limited insofar as I am restricted to being myself (Irish, male, bookish). Thus limits are two-fold: they restrict the possible, and exclude the impossible. Given the fundamental duality of Kant's transcendental subject, we already have a good idea as to how cognition is limited: the emergence of cognition is restricted to the marriage of sensibility and conceptuality, and if one or both of these components are missing, or if both are present and yet nothing connects them, cognition is impossible.

[5] René Descartes, *Meditations on First Philosophy*, trans. Michael Moriarty (Oxford: Oxford University Press, 2008), 40.
[6] G. W. F. Hegel, *The Science of Logic*, trans. A. V. Miller (New York: Humanity Books, 1969), 126.
[7] Stephen Houlgate, *The Opening of Hegel's Logic* (West Lafayette: Purdue University Press, 2006), 358n.

This means that in order to comprehensively grasp Kant's concept of cognitive finitude, we will have to establish

A. the limits of sensibility,
B. the limits of the understanding
C. the manner in which they relate to one another
D. the result of their relation (empirically speaking)

Plan

With the preceding in mind, we can outline the plan for our work. First, we will develop the foundations of sensibility and understanding as two separate constituents of cognition – the mode and the material of determinate thought – and then specify each according to the laws which govern them. This initial approach to cognitive finitude focuses on establishing the fact of transcendental conditions as limits, whether sensible (space and time) or intellectual (the categories). This will involve outlining Kant's arguments in the Transcendental Aesthetic, the Metaphysical Deduction and the Transcendental Deduction. That done, we can derive the consequences for cognition empirically speaking, which is to say that we will develop the role of *discursivity* in Kant's conception of cognitive finitude. Once this process is complete, we will have a good understanding of what finitude is. Of course, that is the point at which we have to problematize our understanding of cognitive finitude, a task we undertake with reference to a contemporary debate, namely, the debate between conceptualists and nonconceptualists. Not only do the terms of this lively debate revolve directly around the essential mechanism by which discursivity functions (the inter-dependence of sensibility and understanding), but more intriguingly for our purposes, an argument has arisen amongst the nonconceptualist camp which, while emphasising strongly the *discursivity* of cognition, simultaneously undermines its *finitude*. This argument is encapsulated by Colin McLear's essay 'Two Kinds of Unity in the *Critique of Pure Reason*' (2015). To deal with McLear's challenge to finitude we will refer back to Henry Allison's W. H. Walsh-inspired concept of 'prolepsis', and substantiate our attendant concept of 'a proleptic whole' using two textual analyses of Kant's use of the term 'infinite' in the Transcendental Aesthetic and Metaphysical Deduction. Once this much is done, we will bring the dissertation to its conclusion.

Part II.i

Kant Begins

To Kant's mind the mistake of all past philosophers was their inability to develop a rigorous model of cognition with respect to experience. Each term implies the other; without an understanding of the structure of one, how could one understand the structure of the other? Kant writes, "no cognition in us precedes experience, and with experience every cognition begins" (B1). In the history of philosophy many claimed to know too much, developing metaphysical systems that transgressed the limits of what one could reasonably assert on the basis of experience, while others, more contemporaneous to Kant and sensitive to the sophistry of thought, claimed that certainty itself was an illusion, for experience never offered the universal but only the particular and contingent.[8] Kant sought a way between both tendencies, to retain what made them intelligible while also resolving their difficulties.

Kant understood that the content of our experience – the world we encounter – was conditioned by the marriage of the forms of our sensibility (space and time) with the basic concepts or 'categories' which constitute our understanding. A category, to quote Lewis White Beck, is "an *a priori* concept that serves as a rule for synthesising intuitions and concepts into a complex representation of a phenomenal object."[9] We will develop the terms of this definition at a later stage – for now, it is enough to assert that human subjectivity possesses an invariant structure, and as such we can do nothing but experience the world in accordance with the laws of that structure. Though we do not create the world, we do determine how the world appears, and "consequently… we can have cognition of no object as a thing in itself, but only insofar as it is an object of sensible intuition, i.e. as an appearance" (Bxxv). By means of this logic Kant agreed with the rationalists and dogmatic metaphysicians that we are entitled to a kind of certainty about the world which supersedes our immediate, everyday experience of it, for such entitlement is substantiated by a thorough understanding of our own nature. Not surprisingly, many metaphysicians in the decades since the publication of the *Critique* have conceived of Kant's work, not with Copernicus as was his wish, but in the light of *Pyrrhus*, the ancient Greek general made famous by his habit of incurring such heavy losses that even his victories seemed little better than defeat. Kant's

[8] "But if this impossibility of explaining ultimate principles should be deemed a defect in the science of man, I will venture to affirm, that 'tis a defect common to it with all the sciences, and all the arts, in which we can employ ourselves, whether they be such as are cultivated in the schools of the philosophers, or practised in the shops of the meanest artisans. None of them can go beyond experience, or establish any principles which are not founded on that authority." David Hume, *A Treatise of Human Nature* (London: Penguin Books, 1985), 45.
[9] Lewis White Beck, 'Introduction' in *The Completeness of Kant's Table of Judgments* by Klaus Reich (Stanford: Stanford University Press, 1992), xiii.

critical project vastly diminished the field of what philosophy could reliably state to be the case, and the tradition's grasp of supersensible entities or objects (like God and the soul) had to be relinquished. That is, alongside the empiricists and sceptics, Kant's transcendental idealism institutionalises the principle that the subject is cognitively finite – what we know of the world is restricted to our capacity to experience it, to the world as appearance, as opposed to the 'world' beyond experience, the territory of the thing-in-itself. In order to develop the argument that will negotiate both empiricist and rationalist positions, Kant's *Critique* begins by asking how it is possible for the rational agent to make what he calls *synthetic a priori judgments*. To grasp Kant's model of cognition, we must start with a description of what this form of judgment entails.

Synthetic *A Priori* Judgments

Contained in the phrase is a two-fold distinction between, on the one hand, *analytic* and *synthetic* judgments, and on the other, *a priori* and *a posteriori* judgements. In the analytic judgment, the predicate is contained logically in the subject, as in the sentences 'this man is mortal', 'the liquid is non-solid', or to use Kant's favoured example, 'all bodies are extended'. In the synthetic judgment, by contrast, the subject does not contain the predicate, as in the sentences 'the man is fat', 'the liquid is hot', or again to use Kant's example, 'all bodies are heavy'. According to Kant, one

> could also call the former judgments of clarification and the latter judgments of amplification, since through the predicate the former do not add anything to the concept of the subject… while the latter, on the contrary, add to the concept of the subject a predicate that was not thought in it at all. (A7/B11)

As for the second distinction, Kant holds that the appellation *a priori* pertains to a judgment when that judgment is made without experience providing the basis for predication. That is, an *a priori* judgment is one that says 'A is B', without my coming to know the B-ness of A through a sensible encounter. This is not to say that the components of an *a priori* judgment can't be empirical: 'all bachelors are unmarried' is an example of an *a priori* judgment. The point is that whatever the nature of the subject and predicate, the *justification* for the use of the predicate is not verified by experience. Given that the justification for the use of the predicate is not dependent upon the contingency of experience, *a priori* judgments are characterised by a strict necessity. Thus all analytic judgments are *a priori*, insofar as one's knowledge that the predicate is contained in the subject does not depend on one's experience. Finally, *a posteriori* judgments do depend upon one's experience for their validity: to know my neighbour is fat, I have to see him. Distinctions grasped, all one need do now is generate their combinations. Synthetic *a posteriori* judgments are unproblematic – we only have to consider to a lesser

or greater extent what experience furnishes us with. Analytic *a priori* judgments are also readily intelligible – as mentioned already, every analytic judgment must be *a priori* insofar as the concept of the subject mandates, without doubt, that certain predicates must pertain. In Kant's *Prolegomena*, he underlines the *a priority* of analytic judgments with reference to the principle of contradiction, for "since the predicate of an affirmative analytic judgment is already thought beforehand in the concept of the subject, it cannot be denied of that subject without contradiction" (*Prol* 4:267). Ultimately the combination that Kant wishes to substantiate becomes apparent: synthetic *a priori* judgments are propositions which do not draw the necessity of their predication from experience, and yet nevertheless conjoin predicates to subjects *without* the former being logically implied by the latter. Kant poses the problem of their possibility thus: "If I am to go outside the concept *A* in order to cognize another *B* as combined with it, what is it on which I depend and through which the synthesis becomes possible, since I do not have the advantage of looking around for it in the field of experience?" (A9/B13)

Before the migraine sets in, the reader may call a halt to the process and counter Kant's question with an apt one of their own, namely, why is it *necessary* to make sense of synthetic *a priori* judgments? Kant's response would be to cite David Hume, the great English empiricist who interrogated the "connection of cause and effect" and thereby interrupted Kant's "dogmatic slumber" (*Prol* 4:260). Consider the following as emblematic of Hume's sceptical reasoning:

> [w]hen we infer effects from causes, we must establish the existence of these causes; which we have only two ways of doing, either by an immediate perception of our memory or senses, or by an inference from other causes; which causes again we must ascertain in the same manner, either by a present impression, or by an inference from *their* causes, and so on…[10]

That is, Hume asserted that the justification for imputing a cause to an effect is sourced from our experience, and insofar as experience – even the collective experience of mankind, throughout history – is limited, it can never upgrade the status of an observed phenomenal process into a *universal and necessary law*.[11] To quote Terence Penelhum, Hume's sceptical challenge is the insight that "the accumulation of similar instances does not show the practice of inferring similar outcomes to be one

[10] Hume, *A Treatise of Human Nature*, 130.

[11] Insofar as he agreed with Hume, Kant writes that if one wanted to prove the universality of causation "by saying that experience constantly offers examples of a regularity of appearances that give sufficient occasion for abstracting the concept of cause from them, and thereby at the same time thought to confirm the objective validity of such a concept, then one has not noticed that the concept of cause cannot arise in this way at all" (A91/B124).

that leads to truth."[12] Insofar as human experience trades in the currency of particular and contingent events (human experience is, in a word, *finite*), how can one know what must always be the case – e.g. that every event must be preceded by a cause – if one has not witnessed eternity, nor is capable of knowing everything at once? Therein lies the gauntlet that Kant has to pick up, and for the solution of which he requires an answer to the question of how synthetic *a priori* judgments are possible. After all, any claim to the universal necessity of causation, viz. any judgment that mandates one event's occurrence results in the production of another event, must be of this kind.

> [I]t is wholly impossible for reason to think such a connection *a priori* and from concepts, because this connection contains necessity; and it is simply not to be seen how it could be, that because something is, something else necessarily must be also…" (*Prol* 4:257).

Causation is not contained in the concept of an event, and yet must be predicated of all events, and thus must be justified beyond the remit of personal experience. If Kant can demonstrate the manner in which synthetic *a priori* judgment operates, he will demonstrate how a finite rational agent such as the human subject can achieve fundamental and universal knowledge. Kant affirms that only one avenue is available to philosophy in order to accomplish this goal, and thereby institutes his Copernican revolution:

> Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them *a priori* through concepts that would extend our cognition have, on this presupposition, come to nothing. Hence let us once try whether we do not get farther with the problems of metaphysics by assuming that the object must conform to our cognition, which would better agree with the possibility of an *a priori* cognition of them… (Bxvi)

To put this another way, Kant's solution is to justify synthetic *a priori* knowledge with reference to the structure of our cognition, that is, with reference to the conditions of our subjectivity which make experience possible in the first place. Therein arises the transcendental quality of Kant's critical philosophy: "I call all cognition transcendental that is occupied not so much with objects but rather with our mode of cognition of objects insofar as this is to be possible *a priori*" (A11-12/B25).

Structure of Cognition

In deducing the conditions for the possibility of experience, Kant's theory will outline exactly what the structure of our cognition is, and in following the line of his argument, we will come to a better understanding of the cognitive finitude that is our topic.

[12] Terence Penelhum, *David Hume: An Introduction to his Philosophical System* (Indiana: Purdue University Press, 1992), 113.

In brief, cognition is composed of two elements, or

two fundamental sources of the mind, the first of which is the reception of representations (the receptivity of impressions), the second the faculty for cognizing an object by means of these representations (spontaneity of concepts); through the former an object is given to us, through the latter it is thought in relation to that representation (as a mere determination of the mind) (A50/B74).

That is, for Kant, cognition can be reduced to two irreducible powers of representation: sensibility and the understanding. From our sensibility we receive intuitions, and from our understanding we generate concepts. Intuitions are *immediate* and *particular*, whereas concepts are *indirect* and *general*. Intuitions supply the "matter for cognition from the senses," (A86/B118) whereas concepts are the mode of cognition supplied by the intellect. This dual differentiation is complimented by another distinction, viz. the division of the status of the faculties into spontaneous and passive. The faculty of sensibility is passive, as intuitions are sensory data we receive in the form of a manifold, whereas the faculty of the understanding is spontaneous, as it constructs concepts using the manifold of intuition as its basis. Jonathan Bennett asserts that the understanding "enables us to organise intellectually our raw material by classifying, discriminating, judging, comparing…"[13] Nevertheless, Kant is at pains to stress one fact above all: though they are separate from one another, intuitions and concepts need to accompany each other if we are to have an intelligible experience of any kind: "Only from their unification can cognition arise" (A51/B75). Intuitions and concepts must, if they are to represent meaningfully, co-operate. In a famous phrase, Kant asserts the requirement to co-operate thus:

Thoughts without content are empty, intuitions without concepts are blind. It is thus just as necessary to make the mind's concepts sensible (i.e. to add an object to them in intuition) as it is to make its intuitions understandable (i.e. to bring them under concepts)" (ibid.).

Insofar as Kant's goal is to explicate synthetic *a priori* knowledge, he must develop a theory of the structure of cognition, and if cognition is a composite of two elements, then it follows that he must develop two theories, one for each of the structures of the individual constituents of cognition. The first *a priori* structure he will theorize is that of sensibility, in the Transcendental Aesthetic. In the Aesthetic, Kant identifies space and time as the pure forms of sensibility, which is to say that space and time are the non-conceptual conditions necessary for one to have a sensible experience of any kind. Following the Aesthetic is what many consider to be the core of the *Critique*, namely, the Transcendental Analytic. In the Analytic Kant performs a similar operation upon the faculty of the understanding as he does to the faculty of sensibility in the Aesthetic: he identifies the pure structure of the understanding itself.

[13] Jonathan Bennett, *Kant's Analytic* (Cambridge: Cambridge University Press, 1966), 53.

That is, in the Analytic Kant presents a lengthy and dense argument for the existence of twelve pure concepts or *categories*, which are the pillars, so to speak, of "the intellectual conditions of human cognition."[14] The Analytic's argument is divided into two parts, the first of which takes place in the chapter named 'On the Clue to the Discovery of all Pure Concepts of the Understanding' which we traditionally refer to as 'the Metaphysical Deduction'. The second part of the argument for the existence of the twelve *a priori* categories of the understanding falls in the chapter 'On the Deduction of the Pure Concepts of the Understanding', which will be designated by the title 'the Transcendental Deduction'.

The consensus amongst scholars is that the Metaphysical Deduction *identifies* Kant's pure concepts of the understanding, and the Transcendental Deduction demonstrates their objective validity.[15] As a result of their roles and relative disparity in length (the latter is easily three times the size of the former), commentators tend to focus exclusively on the Transcendental Deduction. For our purposes, however, an understanding of the Metaphysical Deduction is just as important as the Transcendental. It is the Metaphysical Deduction which justifies precisely which internal functions of thought are to be counted as pure concepts of the understanding, viz. the laws of the intellect. Thus, it's important to keep in mind that whilst the Transcendental Deduction substantiates the role of the limits of intellect in cognition, the Metaphysical Deduction is where those limits are first described. Technically speaking, if answering the question 'how are synthetic *a priori* judgments possible?' is Kant's aim, one need look no further than a combination of the Aesthetic and the Metaphysical Deduction.[16] The Transcendental Deduction (and to a lesser extent, the proofs of the principles of pure understanding) explains why this answer is correct. For now, however, we must begin with discovering the limits of the material of cognition, namely, the sensible conditions of space and time.

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[14] Allison, *Kant's Transcendental Idealism*, 133.

[15] Jill Buroker, *Kant's Critique of Pure Reason*, (Cambridge: Cambridge University Press, 2006), 79; Lewis White Beck, *A Commentary on Kant's Critique of Practical Reason* (Chicago: University of Chicago Press, 1960), 110; Bryan Hall, *The Arguments of Kant's Critique of Pure Reason* (Plymouth: Lexington Books, 2011), 60; James Van Cleve, *Problems From Kant* (Oxford: Oxford University Press, 1999), 88.

[16] See Béatrice Longuenesse's essay 'Kant in *a priori* concepts: the metaphysical deduction of the categories' in *The Cambridge Companion to Kant and Modern Philosophy*, ed. Paul Guyer (Cambridge: Cambridge University Press, 2006). At the beginning she writes that two steps are necessary to answer this question. "The first step was the argument offered in the Transcendental Aesthetic," whereas the "second main step" takes place in "Chapter One of the Transcendental Analytic in the *Critique of Pure Reason*, [where] Kant establishes a table of the categories, or pure concepts, according to the 'leading thread' of the table of the logical forms of judgment." (p. 129)

Part II.ii

The Transcendental Aesthetic

Though not without its challenges, the Transcendental Aesthetic is taken to be less complex than the Analytic. The reason for this (relative) simplicity is, according to Kant, that insofar as "pure intuition contains merely the form under which something is intuited, and pure concept only the form of thinking of an object in general," (A50-51/B75) the idea that the form under which something is intuited is directly relevant to sensible objects is self-evident, whereas the idea that certain *concepts* have a necessary determinate relation to sensible objects is not. I can readily conceive of the fact that space and time are necessary components of my encountering an object, whereas the role of pure concepts (like 'negation') in my experience of objects seems less obligatory. Kant writes

> For that objects of sensible intuition must accord with the formal conditions of sensibility that lie in the mind *a priori* is clear from the fact that otherwise they would not be objects for us; but that they must also accord with the conditions that the understanding requires for the synthetic unity of thinking is a conclusion not so easily seen (A90/B122-123).

The variance in terminology from the Aesthetic to the Analytic reflects the difficulty of the latter: whereas Kant performs two kinds of *deductions* in the Analytic to derive the pure concepts of the understanding, in the Aesthetic, the majority of Kant's argument for space and time as the conditions of sensible experience is accomplished by a section named the Metaphysical *Exposition*.

In order to explain the structure of sensible cognition, Kant seeks to purify sensibility of every possible extraneous influence:

> we will… first isolate sensibility by separating off everything that the understanding thinks through its concepts, so that nothing but empirical intuition remains. Second we will then detach from the latter everything that belongs to sensation, so that nothing remains except pure intuition and the mere form of appearances… (A22/B36)

Here we must note a distinction, one that will prove important for our discussion later on, viz. the distinction between intuition and sensation. Kant's introduction of the term at the beginning of the Aesthetic is somewhat nebulous: "The effect of an object on the capacity for representation," he writes at A20/B34, "insofar as we are affected by it, is sensation." Given that intuition has been just defined as the manner in which cognition "relates immediately to" objects (A19/B33), one must grant that this description of the role of sensation is extremely similar. After all, the difference between being affected by an object and relating immediately to an object seems almost null. This early textual similarity has an effect in the secondary literature, wherein the nature of the distinction is frequently made ambiguous.

Consider this summary proffered by A. D. Lindsay: "Kant thus takes over from the empiricists the view of the passivity of the mind in sensation. Sensation is the given, understanding the spontaneous element of knowledge. He holds that there is no knowledge without these two elements…"[17] Despite this initial ambiguity however, as Kant proceeds he defines sensation more precisely: "I call all representations pure (in a transcendental sense) in which nothing is to be encountered that belongs to sensation" (ibid.). From this statement, Norman Kemp-Smith draws the following helpful conclusion: "We can speak of pure intuitions, but not of pure sensations."[18] Sensation, it becomes clear as the *Critique* develops, is defined first as a *constituent of* intuition, and second as the transmitting event of an affect or internal perturbation. This definition of sensation is substantiated at a far later stage in the *Critique*, when Kant writes that it "refers to a subject as a modification of its state" (A320/B376), and also by a small note taken from his own copy of the *Critique*, which reads "Intuition is related to the object [*Objekt*], sensation merely to the subject."[19] We can thus confidently affirm that in Kant's schema, while still belonging to the class of representation, sensation is a wholly empirical, unprocessed and indeterminate representation; in the words of Lucy Allais sensations "are nonintentional or nonreferential; they do not, themselves, present objects to the mind."[20] One could classify a sensation as pre- or sub-intuition, capable of only "intensive, not extensive, magnitude."[21] To use Kant's own examples, he writes that "things like colours, taste, etc. are correctly considered not as qualities of things, but as mere alterations of our subject, which can even be different in different people" (A29/B44).

Moving on, Kant's intention in the Transcendental Aesthetic is to analyse intuition in isolation from the two kinds of content it would otherwise exhibit: its material, affective content and its conceptual content. The completion of this task affords one the insight that what remains is simply the pure form of the faculty of sensibility:

> if I separate from the representation of a body that which the understanding thinks about it, such as substance, force, divisibility, etc. as well as that which belongs to sensation, such as impenetrability, hardness, colour, etc., something from this empirical intuition is still left for me, namely extension and form. These belong to the pure intuition, which occurs *a priori*… as a mere form of sensibility in the mind (A20-21/B35).

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[17] A. D. Lindsay, *Kant* (Westport: Greenwood Press, 1970), 66.
[18] Norman Kemp-Smith, *A Commentary to Kant's* Critique of Pure Reason (New York: Palgrave Macmillan, 2003), 79
[19] See standard text, p. 155.
[20] Lucy Allais, 'Kant, Non-Conceptual Content and the Representation of Space' in *Journal of the History of Philosophy* 47, no. 3 (2009), 398
[21] Kemp-Smith, *A Commentary*, 86.

The elements of this pure form of sensibility, or the sensible conditions of cognition, are now defined by Kant as *space* and *time*.

What are Space and Time?

According to Kant, space is aligned with our "outer sense" whereas time is aligned with our "inner sense" (A22/B37). Though Kant gives an outline of the difference between the senses, his attempt is rather crude. Occasionally, it sounds as though he were trying say that we experience space only 'outside' of us and time only 'inside' of us.[22] Kant clearly has no mandate for such a position: not only is humanity embodied, such that one has an internal spatial awareness of where one's limbs sit in relation to one another, but moreover, the world alters and changes before our eyes, as people are born and die, birds fly from one tree to another, day passes to night, etc. The point of Kant's distribution of sense is not to assign different locations of implementation to space and time. Rather, this distribution of sense is used to draw our attention to the minimum criteria the transcendental sensible framework must supply in order for one to experience physical *and mental* objects. That is, while the need for a description of the sensible conditions of one's encounter with a three-dimensional object is obvious, given Kant's aim, Kant must also account for certain *psychological* objects that routinely emerge in one's consciousness, insofar as the latter are not purely conceptual or logical but are, in a very real sense, *felt* entities that *intrude* upon our experience of self. Hence, intuition is an immediate and particular representation the object of which can be either external or *internal*. Though the co-operation of both sensible conditions is necessary for one to have an empirical intuition, Kant's distribution of space and time into outer and inner sense speaks to a common-sense analysis of the nature of extra-conscious vs. intra-conscious experience. Consider:

a) *Outer sense*: if time suddenly stopped, as though reality was a film one could pause, every discrete existent beyond our consciousness (e.g. a chair, a beach ball, another person, etc.) could still be said to exist spatially, like a statue frozen in place. "In space their form, magnitude, and relation to one another is determined, or determinable" (A22/B37). Were the situation reversed, however, and space 'ceased' in an analogous manner, it is not immediately apparent in what sense one could assert that each of those objects still existed. The chair's three-dimensional occupation of space seems crucial to its being a chair, while its progression through time does not.

[22] Especially when Kant issues statements like "Time can no more be intuited externally than space can be intuited as something in us" (A22/B37). However, as I make clear, Kant clearly appreciates the fact that we intuit time passing in the external world, and that we intuit the spatial location of various body parts.

b) *Inner sense*: every discrete existent within our consciousness (e.g. memories, daydreams, paranoid delusions of voices, etc.) must occur moment by moment, in temporal succession. The degree to which any of these existents take place spatially is dubious. Clearly none of our examples 'take up any room' as it were, and even the delusion of hearing voices, though it might imply a logical relation of internal separation (another person speaking inside me to me), could not be said to be properly spatial.

In any case, it is the combination of the two – the unified spatio-temporal framework – that is an irreducible transcendental condition of any intuition. Kant seeks to prove the validity of the spatio-temporal framework's status as the condition of sensible cognition with recourse to an argument split into two parts. Like the Deductions in the Analytic, Kant develops two Expositions in the B-edition: the Metaphysical and the Transcendental. Allison articulates the difference thus: "the task of a metaphysical exposition is to establish the *a priori* origin of a certain representation, while that of a transcendental exposition is to show how this representation grounds the possibility of other synthetic *a priori* knowledge."[23] That is, while both are vitally important for understanding the *Critique* as a whole, we focus our analysis on the arguments developed in the Metaphysical Exposition, for it is in this section that Kant outlines how and why the spatio-temporal framework is a complex of pure intuition. The Transcendental Exposition, on the other hand, is a platform used to make further claims, most notably about geometry. While Kant writes about space and time separately, the steps he takes in their respective Metaphysical Expositions are almost identical in either case, so we can summarise them together.

Kant initially organises his Expositions by posing alternative descriptions of space and time to his preferred option of transcendental idealism: "Now what are space and time? Are they actual entities? Are they only determinations or relations of things, yet ones that would pertain to them even if they were not intuited[?]" (A23/B37). In short, Kant suggests that space and time could be (a) substances, (b) accidents, or (c) relations obtaining between real things, before submitting his own thesis. By outlining the alternative theses thus, not only does Kant establish a baseline from which the Metaphysical Expositions can progress – the point of which, again, is to argue "that our original representations of space and time are *a priori* intuitions"[24] – but Kant also gestures to the famous discrepancy between G.

[23] Allison, *Kant's Transcendental Idealism*, 99.
[24] Buroker, *Kant's Critique of Pure Reason*, 47.

W. Leibniz and Isaac Newton's models on the nature of spatio-temporal reality.[25] Though indebted to both, Newton's legacy is particularly relevant to Kant's critical project. According to Michael Friedman, Kant's "concern with what he calls conditions of possibility is fundamentally shaped by the scientific context of the eighteenth century – the age of the triumph of Newtonianism."[26] That said, Kant did not uniformly accept Newton's explanations for why certain physical theories were applicable in the first case. Friedman writes: "Newton's physics was an unqualified success in both mathematical and empirical terms, but there remained serious conceptual problems concerning whether and how this brilliantly successful theory actually made rational sense."[27] The nature of spatio-temporality, for Kant, was one such area where Newton's explanation required finessing. According to Newton space and time were universal containers of reality. He wrote that "[a]bsolute, true and mathematical time, of itself, and from its own nature flows equably without relation to anything external," and similarly that "[a]bsolute space, in its own nature, without relation to anything external, remains always similar and immovable."[28] Taking the latter as indicative of Newton's approach to both, F. S. C. Northrop writes that

> Newtonian theory… affirms that space is an infinitely extended absolute entity quite independent of matter, in all its essential logical and mathematical properties. Thus this absolute space would exist even if all matter were removed.[29]

Leibniz' views are slightly more complicated, a fact compounded by the fragmentary nature of his extant writings. On the subject of absolute space ("the idol of some modern Englishmen"), Leibniz wrote in a letter to Samuel Clarke that to "maintain… that space is a real absolute being… involves them in great difficulties."[30] The major difficulty that Leibniz ascribed to Newton's conception was that it conferred upon space (and consequently time) the mantle of an "eternal and infinite" category.[31] Insofar as infinity and timelessness ought to denote the proper domain of Godliness, Leibniz held that Newton's ideas were forced to conflate spatio-temporality with divinity: indeed, "some have believed it to be God himself."[32] This cannot be, writes Leibniz, because space "consists of parts," and God cannot be divided

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[25] Of course the substance of this debate revolves around the letters exchanged by Leibniz and Samuel Clarke, not Newton himself. See Roger Ariew, ed. *G. W. Leibniz and Samuel Clarke: Correspondence* (Indianapolis: Hackett Publishing Company, Inc., 2000).
[26] Michael Friedman, *Dynamics of Reason* (Stanford: CSLI Publications, 2001), 9.
[27] Ibid., 10.
[28] Isaac Newton, *Sir Isaac Netwon's Mathematical Principles of Natural Philosophy and His System of the World (Volume One: The Motion of Bodies*), trans. Andrew Motte, ed. Florian Cajori (Berkeley: University of California Press, 1974), 6.
[29] F. S. C. Northrop, 'Leibniz's Theory of Space' in *Journal of the History of Ideas* 7, no. 4 (October, 1946), 423.
[30] Ariew, *G. W. Leibniz and Samuel Clarke: Correspondence*, 14.
[31] Ibid.
[32] Ibid.

into smaller pieces.[33] Hence Leibniz concludes that, "for my own opinion, I have said more than once that I hold space to be something purely relative, as time is," and that it is "an order of co-existence as time is an order of successions."[34] *What* space and time are relative to are the immaterial, simple substances that comprise the basic units of Leibniz's physics: "monads are the true atoms of nature, and, in a word, the elements of things."[35] An analysis of the intricacy of Leibnizian monadology is beyond my power; nevertheless, we can affirm that monads were accorded a level of (true) reality that everything else (everything which results from the composition of monads) were not. Nicholas Rescher states: "According to Leibniz, the monads do not just 'enter into' the composite things of this world, but actually constitute them" and subsequently Leibniz "treats composites or aggregates as mere illusions."[36] Thus, if the monads composing bodies to which space and time obtained were suddenly gone, extension and duration would disappear. Daniel Garber writes: "Leibniz holds space would not exist were there not bodies and the substances that underlie them."[37] Give this brief précis, we will attribute to Leibniz's thesis of spatio-temporality the name 'relative forces', to denote the dependency which Newton's model abstains from. As one can now hopefully see, the Newtonian and Leibnizian schools of thought (absolute containers vs. relative forces) occupy two positions on the metaphysics of space and time. Yet Kant has proffered three alternatives to his transcendental idealist position. Allison clarifies this discrepancy by stating the fact that Kant "effectively elides" the positions on substance and accident.[38] That is, though "Newton denies (largely on theological grounds) that they are substances, asserting instead that they are accidents of God," his description of space and time as 'absolutes' or *cosmological* accidents nevertheless connotes a substance, and so Kant structures his list of alternatives accordingly.[39]

The question now is how does Kant argue for space and time as *a priori* intuitions, in opposition to Newton and Leibniz's alternative theories? Kant's Metaphysical Exposition presents four arguments, which are most usefully divided into two parts. The first part argues for the necessity of conceiving of space and time as *a priori* (and thus necessary and universal) representational conditions. The second

[33] Ibid.
[34] Ibid.
[35] Nicholas Rescher, *G. W. Leibniz's Monadology: An Edition for Students* (Pittsburgh: University of Pittsburgh Press, 1991), 17.
[36] Ibid., 46.
[37] Daniel Garber, 'Leibniz: Physics and Philosophy' in *The Cambridge Companion to Leibniz*, ed. Nicholas Jolley (Cambridge: Cambridge University Press, 1995), 303. See also Edward Khamara, 'Leibniz's Theory of Space: A Reconstruction' in *The Philosophical Quarterly* 43, no. 173 (October, 1993): 472-488.
[38] Allison, *Kant's Transcendental Idealism*, 98.
[39] Ibid.

part argues for the necessity of conceiving of space and time as pure *intuitions*, which is to say nonconceptual representational conditions. That said, we can summarise the first two arguments for the *a priority* of our sensible conditions simultaneously, because both arguments stress the same factor: space and time are *a priori* inasmuch as they are presupposed in the occurrence of every sensible event, whether real, imagined or otherwise. In the case of spatial relation, one could not attend to an object external to oneself, or in any kind of dimensional relation to another object, *without* the object(s) being given in space: "in order for me to represent them as outside and next to one another, thus not merely as different but as in different places, the representation of space must already be their ground" (A23/B38). Thus spatial receptivity cannot be acquired "from the relations of outer appearance through experience, but this outer experience is itself first possible only through this representation" (ibid.). Similarly time "is not an empirical concept that is somehow drawn from an experience" (A30/B46). In the case of temporal relations, one could not acquire the habit an ordering different times sequentially or ordering of different events at the same time, if time did not already precede (and constitute) one's experience as such: "For simultaneity or succession would not themselves come into perception if the representation of time did not ground them *a priori*" (A30/B46). Kant's emphasis on the necessity for presupposing space and time in every episode of experience is further developed by his claim, more pertinent to space, that one could not even conceive of a situation wherein neither extension nor duration were factors. Thus he writes that one "can never represent that there is no space, though one can very well think that there are no objects to be encountered in it. It is therefore to be regarded as the condition of the possibility of appearances, not as a determination dependent on them," (A24/B38-39) and similarly "one cannot remove time, though one can very well take the appearances away from time. Time is therefore given *a priori*. In it alone is all actuality of appearances possible" (A31/B48). According to Douglas Burnham and Harvey Young, Kant's initial argument thus repudiates "an empiricist position in the spirit of Locke, one that maintains that our concept of space is *a posteriori*, derived from our observation of spatial relations."[40] Allison echoes Burnham and Young's sentiment when he writes that the purpose of the Metaphysical Exposition's initial argument is to reject the empiricist account:

> the claim is not simply that space must be presupposed in order to represent things as spatial, but rather that it must be presupposed as a condition of the possibility of the perception of the relations from which the empiricist account claims it is derived.[41]

[40] Douglas Burnham and Harvey Young, *Kant's Critique of Pure Reason* (Edinburgh: Edinbugh University Press, 2007), 42.
[41] Allison, *Kant's Transcendental Idealism*, 102.

If one attributes to space or time the status of accidents that determine objects, Kant takes this attribution to entail the *contingency* of space or time, which in turn entails the possibility of their disappearance or of their not obtaining. Thus Kant precludes the possibility that the spatio-temporal framework is best described in accidental or relational terms, and concomitantly asserts that it must be *a priori*. At this point it will be useful to highlight Jill Buroker's classificatory system. She writes that the initial argument (above) seeks to prove "that space and time are *a priori* in the weak sense [insofar as] they are not derived from the empirical data given in experience,"[42] whereas this latter argument seeks to prove "that space and time are *a priori* in the strong sense [insofar as] they are necessarily features of experience."[43] Moreover, in accordance with Allison's remark that Kant elides the distinction between substance and accident when representing Newton's view of space and time, Kant straightforwardly assumes that the arguments also preclude the final alternative (pertaining to substance). In the 'Conclusion from these concepts' section on time, for instance, Kant's declares that "Time is not something that would subsist *for itself* or attach to things as an objective determination, and thus remain if one abstracted from all subjective conditions of the intuition of them" (A32/B49) (my italics).

Kant's last two arguments stress the incompatibility of attributing to the spatio-temporal framework a conceptual component, and thereby serve to substantiate the characterisation of space and time as pure intuitions. Taken together, they argue for what one might dub the 'Universal Dimension' thesis. This thesis is that space and time are singular and continuous, which one cannot but treat as unlimited magnitudes. In the case of spatial singularity, Kant asserts that "one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space" (A25/B39). Kant hence asserts that any part of space, any spatial locality – like the volume of a cone, or the room of a house – are simply parts of a total spatial continuum. "Put another way, any two distinct spaces are themselves spatially related."[44] This thesis again hearkens back to the Leibniz and Newton debate, insofar as the latter held that "space has similar topological and Euclidean metrical properties everywhere, it is homogenous" whereas the former found this sameness of space unconvincing on the basis that it violated "the Leibnizian principle of the identity of indiscernibles."[45] That is, Newton's conception opposes Leibniz's "axiom" that "*nowhere…is there*

[42] Buroker, *Kant's Critique*, 47.
[43] Ibid., 50.
[44] Ibid., 52.
[45] Northrop, 'Leibniz's Theory of Space', 427. For an early, pre-Critical elaboration of Kant's preference for Newton in this regard, see his 'Concerning the Ultimate Ground of the Differentiation of Directions in Space' (1768) in

perfect similarity."[46] Kant's preference for a Newtonian interpretation on this count is also reflected in the context of time: "Different times are only parts of one and the same time" (A31/B47). The salience of the unitary nature of space and time is that each must be recognised as a singular, not a general, representation. Concepts, as we asserted earlier, are typified by their generality, as they "refer to something common to a number of experiences."[47] Take, for instance, the concept of 'seat'. The concept is instantiated in every particular object designed to be sat upon, for every object designed to be sat upon simply is a seat.[48] While every object called 'seat' meets the criteria necessary for the concept to be applied, the concept is not exhausted in its materialisation, it is applicable in as many instances as one can think of, without limit. This is the sense in which a concept is general and never singular, and consequently the sense which acquires for Kant's argument its relevance, for the unitary nature of space and time implies that they are singular: there is only *one* space, and only *one* time. Allison supports this reading, though he stresses the role of logical priority in order to serve the same argument: "The main point is that the marks or partial concepts out of which a general concept is composed are logically prior to the whole. But this is not the case with space and its parts."[49] That is, a concept is general in the sense that it is an aggregation of the instances it applies to, it is a result. Space, on the other hand, *precedes* every local or limited area *within* it.

Next, insofar as these total spatial and temporal continuums ground every experience of a particular space or time, Kant claims that their extension is *boundless*, for every part of space and every moment in time is surpassed by another. Space is "an infinite given magnitude," (A25/B40) and time "must… be given as unlimited" (A32/B48). Kant is here again expressing the difference between an intuition's singularity and a concept's generality. Consider Kant's assertion:

> Now one must, to be sure, think of every concept as a representation that is contained in an infinite set of different possible representations (as their common mark), which thus contains these under itself; but no concept, as such, can be thought as if it contained an infinite set of representations within itself. Nevertheless space [and time are each] so thought… (A25/B40).

Immanuel Kant: Theoretical Philosophy (1755-1770), trans. and ed. David Walford (Cambridge: Cambridge University Press, 1992), 361-372.

[46] G. W. Leibniz, 'Nature Itself; or, The Inherent Force and Activity of Created Things – Confirming and Illustrating the Author's Dynamics (1698)' in *G. W. Leibniz: Philosophical Texts*, trans. and ed. R. S. Woolhouse and Richard Francks (Oxford: Oxford University Press, 1998), 220.

[47] Lorne Falkenstein, *Kant's Intuitionism* (Toronto: University of Buffalo Press, 1995), 218.

[48] The scope of what can constitute a seat is limited for the purpose of making our point. Clearly, a seat can also be an object designed for another purpose than sitting, or it can be a natural object, not designed at all.

[49] Allison, *Kant's Transcendental Idealism*, 110.

Kant's argument is that to the degree that space and time are without boundary, this boundlessness is internal to each – they *contain* an unlimited number of parts. If one thinks about a space adjacent to another space, this situation is tantamount to saying that a larger space is portioned into two. By contrast a concept cannot *contain* an infinite number of parts, i.e. significations, for the whole could not be apprehended and no meaning would be conveyed. As Sebastian Gardner says, such a concept "would be one with an infinitely rich content, and could not be grasped by the finite mind."[50]

The Ideality of Space and Time

The purpose of the Metaphysical Exposition in the Aesthetic should now be clear: Kant demonstrates that space and time are the transcendental conditions of our sensibility by arguing that space and time are *a priori*, and that they are (non-conceptual) intuitions. Described alternately in the words of Graham Bird, the Metaphysical Exposition classifies space and time "as underivable from empirical experience" and "as particulars whose provenance attaches them to sense and not understanding."[51] Space and time contribute to the cognitive finitude of the Kantian subject because they delineate its possibility and impossibility. Just as one of the subsets from each of the four major classes of the categories must be present in order for the rational subject to have a cognition, so too must the pure manifold of space and time.

Finally, as opposed to the Newtonian and Leibnizian conceptions of spatio-temporality, Kant affirms that space and time, as *a priori* intuitions, are *empirically real* but *transcendentally ideal* (A28/B44, A35-36/B52). By the former, Kant means to say our every sensuous intuition of an object is fundamentally constituted within the co-ordinates of a spatio-temporal framework. Space and time are ineliminable aspects of our intuiting the given – they are, in fact, the very basis of the given itself. Hence Kant issues emphatic assertions like: "since our intuition is always sensible, no object can ever be given to us in experience that would not belong under the condition of time" (A35/B52) and "Our expositions accordingly teach the reality (i.e. objective validity) of space in regard to everything that can come before us externally as an object" (A28/B44). In the Transcendental Aesthetic, to repeat the point, Kant takes it that he has demonstrated the necessity of space and time as components of sensibility, which is the very bedrock stratum of our experience, and thus in turn, the pure ground upon which we will build

[50] Sebastian Gardner, *Kant and the Critique of Pure Reason* (London: Routledge, 2000), 79.
[51] Graham Bird, *Revolutionary Kant* (Illinois: Carus Publishing Company, 2006), 157.

our concepts. That is, according to Kant, space and time are the minimum resource that thought needs to think.

At the same time, we must realise that in the Transcendental Aesthetic Kant has established the first beachhead on the battleground of idealism. That is to say, and going back to the latter phrase we highlighted above, Kant's doctrine is committed to the view that space and time are *nothing in themselves*, without relation to the human subject:

> We can accordingly speak of space, extended beings and so on, only from the human standpoint. If we depart from the subjective condition under which alone we can acquire outer intuition, namely that through which we may be affected by objects, then the representation of space signifies nothing at all (A27/B43).
>
> If we abstract from our way of internally intuiting ourselves and by means of this intuition also dealing with all outer intuitions in the power of representation, and thus take objects as they may be in themselves, then time is nothing… Time is therefore merely a subjective condition of our (human) intuition (which is always sensible, i.e. insofar as we are affected by objects), and in itself, outside the subject, is nothing (A34-35/B51).
>
> [Space and time] apply to objects only so far as they are considered as appearances, but do not present things in themselves. Those alone are the field of their validity, beyond which no further objective use of them takes place (A39/B56).
>
> The mere form of intuition, without substance, is in itself not an object, but the merely formal condition of one (as appearance), like pure space and pure time, which are to be sure something, as the forms for intuiting, but are not in themselves objects… (A291/B348).

Hence time and space exist only insofar as we do – they exist, that is, for us. Though our capacity to intuit is restricted to the form of a spatio-temporal manifold, space and time are in turn restricted to the field of our transcendental subjectivity. They are no more and no less than the sensible form of our cognitive finitude. This aspect of Kant's theory of sensible cognition will have important consequences later on, when we consider what lies beyond the conditions of our perception. But now we turn to the Metaphysical Deduction and the second, intellectual component of Kant's cognitive finitude.

Part III

The First Step of the Metaphysical Deduction

In short, the aim of the Metaphysical Deduction is to derive the pure concepts of the understanding from a table of the irreducible logical functions which govern judgment. In order to achieve this aim, Kant first argues for his table of logical functions, then demonstrates how they lead to the pure concepts. Following the pattern he initiated in the Transcendental Aesthetic, Kant equates the *a priori*

structure of intellectual cognition with the "form of the understanding" (A70/B95). To commence an investigation of the form of the understanding, all relation to empirical *qualia* must be removed:

> we abstract from all empirical conditions under which our understanding is exercised, e.g. from the influence of the senses… because these merely concern the understanding under certain circumstances of its application, and experience is required in order to know these (A53/B77).

That said, insofar as the understanding can relate to the *a priori* manifold of sensibility one must stipulate the need to exorcise all *trace* of object-hood; whether one is speaking empirically (of the object itself) or transcendentally (of the conditions of the object), Kant's concern is "with the form of the activity of discursive thinking regardless of the object to which it may apply."[52] In his own words, Kant's goal is to examine the intellectual component of cognition "merely in respect of the laws according to which the understanding brings [representations] into relation to one another when it thinks, and therefore it deals only with the form of the understanding" (A56/B80). The central terms that Kant will rely upon to compose his discussion of the form of the understanding are *concept*, *function* and *judgment*.

We have already stated that Kant held the concept to be the basic unit of the understanding. Again, as stated, concepts are opposed to intuitions. Whereas cognition through intuitions is immediate, particular, and affective, cognition through concepts is mediate, general and discursive. Buroker highlights the etymology of the latter term: "In describing these acts as 'discursive', Kant recalls the Latin *discursus*, which means 'running through'."[53] As such, whenever one cognises through concepts, one employs a representation which is "always related to some other representation" (A68/B93). Given the nature of concepts then, cognition has to employ them in a specific manner; if they cannot relate to anything directly in experience (unlike intuitions, they can only relate to other representations), they must abide by a certain *order*. The procedure or rule by means of which a concept is ordered is called a function: "By a function… I understand the unity of the action of ordering different representations under a common one" (ibid.). Given that a concept abides by certain functions in order to be employed, it still remains to be said what the consequence of that employment is. The answer, of course, is judgment: "the understanding can make no other use of these concepts than that of judging by means of them" (ibid.). That is, while the concept is the primary unit of the understanding, a concept cannot exist without the traction of other representations to ground it. "His point is that concepts have no use

[52] Béatrice Longuenesse, *Kant and the Capacity to Judge* (New Jersey: Princeton University Press, 1998), 73.
[53] Buroker, *Kant's Critique of Pure Reason*, 81.

other than to think of something, an x, as a thing of a certain kind F."[54] To state the same idea more succinctly: a concept only comes into existence if a judgment exercises it.[55] Kant's position therefore is that the minimal exercise of the understanding, and indeed, the minimal exercise of thought, is judgment. "We can… trace all actions of the understanding back to judgments, so that the understanding in general can be represented as a faculty for judging. For according to what has been said above it is a faculty of thinking" (A69/B94).

Kant asserts that the understanding is conceptual and discursive, and its fundamental mode of expression is predication in judgment. Predication necessitates unity between representations, determined by a particular function: "All judgments are accordingly functions of unity among our representations" (ibid.). Now, insofar as our current aim – to discover the form of the understanding by divorcing it from all extraneous content – means eradicating from the understanding any trace of an object (empirical or *a priori*), Kant states that the achievement of our goal consists in isolating the most basic functions of judgment. If one can determine which functions of judgment are minimally required (the simplest functions), the result is a collection of the fundamental logical operations by means of which representations can be unified in thought. That is, the resultant table would reflect the basic structure of judgment, or the basic structure of thinking, with the proviso being that no relation to object-hood is implied. One considers only the necessary relations between basic thought-types, relations which "consist in subsuming individuals under concepts, and subordinating lower (less general) concepts under higher (more general) concepts."[56] By using the terms 'first-order concepts' and 'second-order concepts' to denote concepts and basic judgment-functions respectively, Buroker provides a useful sketch of Kant's argument, legitimating the place of the logical functions:

> Since the first-order concepts are diverse representations, in order to combine them into a judgment, the understanding must employ second-order concepts. These higher-order concepts express the various ways to combine first-order concepts (and other representations, including judgments) to produce judgments of any form. Thus the pure concepts identified here are second-order concepts of the syntactical properties of judgments, which express the logical operations of the understanding.[57]

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[54] Ibid.

[55] This is not to say, of course, that judgments are more fundamental than concepts. Graham Bird explains the reciprocal dynamic which characterises the concept-judgment relation: "A Kantian way of putting the point would be to say that the constituent concepts are required for the *content* of judgment, but that they presuppose a judgment form into which they can fit…" (*Revolutionary Kant*, 263)

[56] Longuenesse, 'Kant and *a priori*', 140.

[57] Ibid., 84.

At this stage, thinks Kant, we are in luck: he dismisses the need to perform a laborious excavation of the basic functions of judgment in the *Critique*, because the philosophical labour required to produce such a collection has already been done. One need look no further than the discipline of *general logic*.

General Logic

What does Kant mean by general logic, a topic he lectured widely upon for the entirety of his career? At A54/B78 Kant writes that "general logic… abstracts from all contents of the cognition of the understanding and of the difference of its objects, and has to do with nothing but the mere form of thinking." At A60/B84 he states: "General logic analyses the entire formal business of the understanding… into its elements, and presents these as principles of all logical assessment of our cognition." Perhaps the most useful description comes at A55/B79: "General logic abstracts… from all content of cognition, i.e. from any relation of it to the object, and considers only the logical form in the relation of cognitions to one another, i.e. the form of thinking in general." The last is useful because one can break it down into three separate assertions, each of which explains a key aspect of the logic that is Kant's focus: this logic is *general* because it lacks any reference to "all content of cognition", it is *pure* because it rejects "any relation of it to the object," and it is *formal* because it "considers only the logical form in the relation of cognitions to one another, i.e. the form of thinking in general."

That said, and as in other sections, Kant further develops his position "by exclusion or negation."[58] In this case Kant distinguishes between pure logic, which "has to do with strictly *a priori* principles and is a canon of the understanding and reason, but only in regard to what is formal in their use," and *applied* logic, which "is directed to the rules of the use of the understanding under the subjective empirical conditions that psychology teaches us" (A53/B77). This distinction further serves to excise from the form of the understanding any extraneous material: having barred the involvement of empirical and *a priori* sensibility, Kant now emphasises that the content of conscious, psychological states is also incidental. Kant was always keen to make this point. In the *Vienna Logic*, for instance, Kant dismisses applied logic explicitly, though using different terms – there he distinguishes between *logica naturalis* and *logica artificialis*. For Kant, "only *logica artificialis* is ever called logic,"[59] as the concern of *logica naturalis* is with the vicissitudes of empirical consciousness, such that "there would arise from this a science of how we think under various hindrances, not of how we ought to think."[60] This is not to say,

[58] Clayton Bohnet, *Logic and the Limits of Philosophy in Kant and Hegel* (New York: Palgrave MacMillan, 2015), 34.
[59] Ibid.
[60] Ibid.

however, that Kant classifies applied logic or *logica naturalis* as an unfit discipline for thought: in later lectures, Kant again stresses that applied logic "really ought not to be called logic," but admits freely that, insofar as it describes psychological interferences in the lawful use of our understanding, we can learn "what one ought to do in order to make correct use of the understanding under various subjective obstacles and restrictions."[61] While Kant's distinction between pure and applied logic is practical insofar as it contributes to explaining the purity of the former, it has its downsides. One could argue that it skirts redundancy inasmuch as sensible inner sense, "by means of which the mind intuits itself, or its inner state," (A22/B37) includes objects of the psychological variety, e.g. memories, emotions, fantasies, and daydreams. Thus Kant purifies logic of this kind of representation twice. More importantly however, Kant's distinction can be misleading. Having been briefed of Kant's distinction, one is inclined to strictly divorce the psychological from the logical. Albeit understandable, this inclination must be checked. One must remember that Kant conceives of logic in its entirety (pure and applied) as "the science of the rules of understanding in general" (A52/B76), and pure logic is the science of the rules of *thought* in general. The minimal exercise of thought is judgment, hence pure logic provides the rules for ordering representations within and between judgments, insofar as the latter is "the mediate cognition of an object, hence the representation of a representation of it" (A68/B93). Thus, Kant's logic pertains to the rules for making inferences and for co-ordinating concepts *in thought*; the *activity of thinking* is what is at stake. If, from a modern point of view, one is tempted to classify the study of the ordering of one's mental representations as belonging to psychology rather than logic, beware. This is not Kant's understanding of the distinction. Kant's logic is hence "more psychological" than one might expect.[62]

As for the tradition that Kant inherits, though Kant references him most vividly in the context of the lineage of the categories, Aristotle is the key influence – according to Paton, Kant "accepted Aristotelian logic as, within its own sphere, complete and final."[63] In the *Vienna Logic*, Kant accords to Aristotle the status of the tradition's progenitor: "Aristotle can be regarded as the father of logic… All our logical terminology is from him."[64] In the *Critique* he writes that

> since the time of Aristotle [logic] has not had to go a single step backwards, unless we count the abolition of a few dispensable subtleties or the more distinct determination of its presentation, which improvements belong more to the elegance than to the security of that science (Bviii).

[61] Immanuel Kant, 'Jäsche Logic' in (18), 533.
[62] Longuenesse, 'Kant on *a priori* concepts', 137.
[63] H. J. Paton, 'The Key to Kant's Deduction of the Categories' in *Mind* 40, no. 159 (July, 1931), 312.
[64] Immanuel Kant, 'Vienna Logic' in *Lectures on Logic*, trans. & ed. J. Michael Young (Cambridge: Cambridge University Press, 1992), 796: 257.

According to Aristotle's account, the fundamental logical types can be enumerated thus: "Of things said without any combination, each signifies either substance or quantity or qualification or a relative or where or when or being-in-a-position or having or doing or being-affected."[65] Paul Studtmann repeats the list of categories, updating the language and providing a helpful example for each.

> According to Aristotle, words signify the following basic types: (1) a substance, like a man; (2) a quantity, like a line two cubits long; (3) a quality, like the white; (4) a relation, like the double; (5) somewhere, like in the Lyceum; (6) at some time, like yesterday; (7) being in a position, like lies; (8) having, like is shod; (9) acting, like cuts; or (10) being acted upon, like is cut.[66]

As to the method by which Aristotle accomplished his ten-fold division, Kant refers to it as a "mechanical procedure," (A66/B91) claiming that Aristotle "rounded them up as he stumbled on them" (A81/B107). This characterisation is inaccurate: most commentators take the view that each Aristotelian category represents an answer to the most basic and irreducible questions one could ask about the world as such.[67] In contrast to this alleged "rhapsody," Kant claims that his insight into the nature of thought *qua* judgment equipped him with an organising principle:

> I cast about for an act of the understanding… that differentiates itself only through various modifications or moments in order to bring the multiplicity of representation under the unity of thinking in general; and there I found that this act of the understanding consists in judging (*Prol* 4:323).

Finally, if we follow the guidelines set forth in general logic "we find that the function of thinking in that can be brought under *four titles*, each of which contains under itself *three moments*" (A70/B95) (my italics). Thus the four major classes of function are Quantity, Quality, Relation and Modality. Within the first class, functions can be Universal, Particular or Singular. Within Quality, functions can be Affirmative, Negative or Infinite. Within the class of Relation, functions can be Categorical, Hypothetical or Disjunctive. And in the last, functions can be Problematic, Assertoric or Apodictic.

Let's spend a moment unpacking these classes, to get a sense of what Kant is talking about. *Apropos* Quantity, what is at stake is the degree of the extension of the subject: Universal judgments pertain to every case, Particular judgments pertain to some cases, and Singular judgments pertain to *this*

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[65] Aristotle, *Categories* in *The Complete Works of Aristotle*: *Volume One*, ed. Jonathan Barnes (New Jersey: Princeton University Press, 1984),1b25–27: 4.

[66] Paul Studtmann, *The Foundations of Aristotle's Categorial Scheme* (Milwaukee: Marquette University Press, 2008), 7-8.

[67] Gilbert Ryle writes that "Aristotle's method, so far as he had one, seems to have consisted in collecting the ordinary interrogatives of everyday speech. He then labels his more important types with nouns formed from these interrogative words" ('Categories' in his *Collected Essays: 1929-1968* [London: Routledge, 2009], 180-181). Terence Irwin concurs: "The different categories correspond to different answers to the 'What is it?' question about different things." (*Aristotle's First Principles* [Oxford: Oxford University Press, 1988], 53.)

case. The class of Quality is best characterised by the first two functions falling under it: a judgment is Affirmative if it claims a state of affairs is the case, or Negative if it claims a state of affairs is not. As for an Infinite judgment, more will be said on this below. For the moment, we can say that it *expresses* something negative but does so in the *form* of affirmation, and thereby describes its subject in an open-ended fashion, e.g. 'the beverage is non-alcoholic'. As Bennett says, the subject of an Infinite judgment "is not assigned to any class but is merely excluded from one and so left, as it were, wandering in the infinite range of alternative possibilities."[68] The class of Relation makes sense of the consequences of combination amongst propositions. The simplest type – whereby the judgment doesn't participate as part of a larger semantic whole – is Categorical judgment, which mandates that the predicate inheres in the subject (*S* is *P*). The other two pertain to complex combination: a Hypothetical judgment mandates that one proposition entails another (if *A*, then *B*), whereas a Disjunctive judgment mandates that one proposition excludes another (either *A* or *B*). *Apropos* Modality, Kant states that "the modality of judgments… concerns only the value of the copula in relation to thinking in general" (A74/B100). Thus by Problematic Kant is referring to judgments which communicate possibility (an example: 'tomorrow might be warm'), by Assertoric he means judgments that communicate certainty ('today is cold') and by Apodictic he means judgments that communicate necessity ('tomorrow must be the day after today').

To return to the main substance of our discussion, we must note that this table of logical functions represents a significant contribution to the being-finite of our cognition. That is, this table institutes the presence of twelve limits to purely conceptual, merely formal judgment. Not only do these functions exhaust the full range of the form of judgment (nothing more than or outside of them is permitted), but they are, within their respective classes, mutually exclusive. Hence one cannot describe the same judgment as both problematic and apodictic – one must choose between the alternatives. Thus Kant has provided us with the first step on the road to intellectual cognitive finitude, namely the limits of thought. That said, this component is not sufficient to explain cognitive finitude as such, insofar as cognition involves a determinate relation to an object that it thinks.

How Does The Table Measure Up?

Returning to the table of logical functions, what are we to make of it? Given our brief rundown, it is clear that Kant's approach is substantially different from the one which results in Aristotle's *Categories* – Kant's table obeys the spirit of Aristotle's ten-fold division, but not the letter. This development is

[68] Bennett, *Kant's Analytic*, 77.

unsurprising when taken with Kant's further claim about the logic of his day: it may not have taken a step back, he wrote, but critically it "has also been unable to take step forward" (Bviii). Hence, while the identity of terms (specifically Quantity, Quality and Relation) suggests close alignment with Aristotle's school of thought, this identity is merely superficial: as Gilbert Ryle demonstrates, though the terms are the same, their meanings are completely different. Take Quality for instance: "in Aristotle's use 'green', 'sweet' and 'honest' signify qualities, but in Kant's use 'Quality' signifies a proposition's being affirmative or negative."[69] Or Relation: these "are in Aristotle's use such predicates as 'cousin of', 'above', 'bigger than', but in Kant's theory they are what are expressed by such conjunctions as 'if', 'or' and (he should have added) 'and'."[70]

Ancient Greek philosophy aside, a consensus view on the validity of the table of logical functions does not exist. Perhaps the most obvious criticism levelled at Kant's table is that it is antiquated, even obsolete, when compared with "the modern, post-Fregean logic that has replaced the logic that was generally accepted in Kant's time."[71] To explore how Kant's table becomes controversial through a comparison with the developments of modern logic, we will turn to P. F. Strawson. According to Henry Allison, Strawson is a perfect "spokesperson" for the view that "Kant's project… is regarded as an obvious non-starter when viewed in the light of modern truth-functional and predicate logic."[72] Béatrice Longuenesse likewise holds that "Strawson rejects Kant's table" in the name of "modern logic, in which the form refers to the logical constants and the rules of composition and derivation adopted in a given calculus."[73] In brief, Strawson makes two arguments in *The Bounds of Sense* that directly pertain to his knowledge of modern logic.[74] First, he asserts that almost any collection of axioms providing the foundations of a logical calculus are a matter of *choice* rather than necessity:

> as far as logical forms are concerned, the logician's choice of primitives *is* a choice… [In modern logic] it is a matter of choice whether we introduce the existential quantifier without a formal definition and define the universal quantifier in terms of it, or vice versa.[75]

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[69] Ryle, 'Categories', 185.
[70] Ibid., 186.
[71] Edward Willatt, *Kant, Deleuze and Architectonics* (London: Continuum, 2010), 47.
[72] Allison, *Kant's Transcendental Idealism*, 134.
[73] Longuenesse, *Kant and the Capacity to Judge*, 5.
[74] Broadly speaking, modern logic was inaugurated at the beginning of the 20th century by the likes of Gottlob Frege, Giuseppe Peano, and Bertrand Russell. For a completely comprehensive overview on the history of the subject, see the *Handbook of the History of Logic* series, specifically *Volume 3: The Rise of Modern Logic*, eds Dov M. Gabbay and John Woods (Amsterdam: Elsevier, 2004) and *Volume 5: Logic from Russell to Church*, eds Dov M. Gabbay and John Woods (Amsterdam: Elsevier, 2009).
[75] Strawson, *The Bounds of Sense*, 80.

The validity of Strawson's argument is borne out by one glaring omission, mentioned in a quote earlier by Ryle. Nor is Ryle the only one to notice: "Today we are struck by the absence of *conjunction*," writes Jill Buroker, "so in this respect Kant's table seems incomplete."[76] That is, insofar as Kant makes room for Hypothetical (if,… then) and Disjunctive (either… or) judgments, by what right does he neglect to include Conjunctive (… and …) judgments from the same class? Clearly, no such justification exists. Kant's omission substantiates Strawson's point that the selection of primitive functions will include (and exclude) contingent elements.

The Englishman nevertheless admits that the idea "that there is some set of fundamental notions which must be represented in one way or another in anything we could properly recognise as a comprehensive and adequate logic of statements" is still valid.[77] Notice that Strawson refers to 'fundamental notions', and not fundamental forms. Insofar as the concept of a logical 'form' is more determinate or complex than the concept of a logical 'notion', we are to understand that Strawson is only willing to entertain a search for primitives of an exceedingly general kind – a generality of greater magnitude, to be sure, than the generality of Kant's logical functions. Turning to modern logic, Strawson posits that two such fundamental notions are "first, the idea of truth-functional composition in general; second, the general idea of quantification."[78] That is, the first logical primitive pertains to "the notion of a proposition as something which is true or false but not both," whereas the second logical primitive pertains to the notion that quantity-values – such as some, all, each, one, few, etc. – must be expressible in any proposition.[79] Granted that these two logical notions are fundamental and "underived,"[80] Strawson flags the fact that their exceeding generality renders them inoperative for the purposes of deducing pure concepts, which is precisely how Kant intends to employ his logical functions. Consider what the co-operation of these fundamental notions guarantee: "something which is essentially determinable as true or false and which essentially involves the introduction of general concepts and their application to specified or identified instances."[81] That is, Strawson contends that the co-operation of truth-functional composition and quantification guarantees only what he terms a "formally atomic proposition," or "a singular subject-predicate proposition,"[82] of the kind 'This A is B'. Now, the

[76] Buroker, *Kant's Critique of Pure Reason*, 88. My italics.
[77] Strawson, *The Bounds of Sense*, 80.
[78] Ibid., 81.
[79] Ibid.
[80] Ibid.
[81] Ibid., 81-82.
[82] Ibid., 82.

Metaphysical Deduction matters only insofar as the table of logical functions leads one to posit the conditions under which each form is necessarily applied to experience, these conditions being Kant's all-important twelve categories. To clarify Strawson's point, one must emphasise that the step from logical function to category entails asking what kind of world must it be, such that each of the logical forms can find traction in empirical judgments dealing with objects of experience. For instance, Kant claims that the universality of causal law is the only answer to the question: what must be true of the world, such that Hypothetical judgments can be intelligibly stated about objects of experience? However, if one begins with Strawson's fundamental notions, or their co-operation in the formally atomic proposition, the same step entails asking the following question: what kind of world must it be, "if we are to make empirical judgments, determinable as true or false, in which we predicate concepts of identified objects of reference?"[83] Therein lies the problem. According to Strawson, when one correctly conceptualises the fundamental units of general logic, the question entailed by the step from general logic to transcendental conditions of experience (or the work done thus far) has contributed nothing to the debate. That is, bringing us to the moment where we can ask "What in general must be true of a world of objects of which we make such judgments"[84] as formally atomic propositions, amounts to no more than asking how are synthetic *a priori* judgments possible. After all, if the latter are possible, the certainty of my judgments about empirical states of affairs is guaranteed. Hence Strawson contends that "[t]he excursion through the forms of logic has not advanced us a single step."[85]

Strawson's arguments are persuasive, and especially the second – for as he admits himself, the notion that *some* kind of basic logical structure exists is surely feasible. The problem, from our modern point of view, is that such a structure is far too general to effect Kant's deduction of the categories. That said, Strawson's criticism of Kant's position is susceptible to counter-argument. One such counter-argument would be to characterise Strawson's criticism as a denial of the viability of Kant's theory merely on the grounds of present-day scientific or mathematical standards. To the extent that such criticism is predicated upon a blind appeal to the authority of modern theory, it would be toothless – one cannot simply dismiss a previous theoretical paradigm (e.g. Newtonian physics) on the basis that a new one (e.g. Einstein's relativistic physics) has emerged. Not only does such an approach ignore the obvious fact of historical continuity, whereby those paradigms which dominate the field today have been made possible only by advancements in the past, but moreover it fails to engage with the historical

[83] Ibid.
[84] Ibid.
[85] Ibid.

text itself, on its own terms, and thereby fails to provide a thorough critique of the arguments which the past author employs. Strawson surmounts this kind of counter-argument: his criticism functions by isolating relevant new developments in the discipline of logic and then *integrating* them into the aims and structure of Kant's text. Insofar as he seeks to judge the merits of an up-to-date Kantianism, his criticism is a success. The second kind of counter-argument, however, is more compelling. It pertains to the point we made above about the distinction between psychology and logic. Allison and Longuenesse both employ the counter-argument that Strawson, blinded by a continuity in terminology, succumbs to the lure of anachronism. According to Allison, "it must be insisted that the modern conception of logical form cannot be seen simply as a replacement for the Kantian conception and, therefore, cannot be appealed to in order to undermine the feasibility of Kant's own project."[86] The problem with Strawson's strategy of replacement – or in my words, integration – is explained thus: "Kant's notion of logical form is not that of modern logic… for Kant 'logical form' means something different, namely the universal rules of discursive thought."[87] It was precisely in relation to Kant's focus on the human activity of thought (in the context of Aristotelian subject-predicate logic) that Frege criticised him:

> Kant, according to Frege, is confused in maintaining that logic deals with the rules *we* (human beings) follow in thinking, rather than with the laws that connect thoughts independently of the way any particular thinker or group of thinkers actually think.[88]

Thus, in the eyes of Allison and Longuenesse both, Strawson misconstrues the object of Kant's logic by interpreting it through the perspective of the object of modern logic, and thereby creates a false equivalence. According to their counter-argument, Kant's general logic is concerned with the constitutive functions (activities of unification) which determine our ability to make judgments, and not – as is the case with Strawson's post-Fregean modern logic – with the "structural features of the proposition that are relevant to truth-preserving inference and are expressed in the language of a logical calculus."[89] To furnish this point with the authority of a disinterested party, we turn to J. M. Bochenski's account in *Modern Logic – A Survey* (1981). Bochenski differentiates modern logic from previous formal logics (such as Scholastic and Aristotelian) by drawing attention to three key methodological principles which "ML took over from mathematics."[90] The first pertains to modern logic's status as a symbolic

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[86] Allison, *Kant's Transcendental Idealism*, 146.
[87] Longuenesse, *Kant and the Capacity to Judge*, 5.
[88] Longuenesse, 'Kant on *a priori* concepts', 158.
[89] Ibid., 74.
[90] J. M. Bochenski, 'The General Sense and Character of Modern Logic' in *Modern Logic – A Survey: Historical, Philosophical, and Mathematical Aspects of Modern Logic and its Applications*, ed. Evandro Agazzi's (Dordrecht: D. Reidel Publishing Company, 1981), 7.

logic: "ML employs artificial *expressions* and builds up its own languages with syntactical *rules* laid down by the logician for this purpose."[91] The second pertains to modern logic's status as formalistic: "the formalistic method is one the rules of which refer exclusively to the graphic shape of tokens, and not to be the meaning of the terms used. Thus 'formalism' and 'calculus' are synonymous."[92] Lastly, and most importantly for our purposes, the third component crucial to modern logic is that it is objective: "We mean by that that ML disregards completely the subjective factors, such as thinking, judging, subjective concept-building and so on, with which most other types of logic are replete."[93] Indeed, it's as though he were actively trying to vouch for Allison and Longuenesse's counter-argument, as Bochenksi is particularly concerned to emphasise this last point:

> This must be well understood. A modern logician is no more dispensed from thinking and judging than is an astronomer or a botanist. But ML has as little to do with the private acts of the logician as astronomy has to do with the mental processes of the astronomer and botany with the feelings of the botanist.[94]

Therefore the distinction which substantiates Longuenesse and Allison's claim – namely that "Kant's primary focus is on the forms of *judging* as a mental activity rather than on the forms of the *judgments* resulting from this activity"[95] – is a coherent counter-argument to Strawson's modern-logic critique of Kant.

The Second Step of the Metaphysical Deduction

Unfortunately, Kant does not render a particularly sophisticated argument for the most important step in his Metaphysical Deduction, namely, the derivation of the categories from the twelve logical functions of judgment. This is undoubtedly the most significant factor contributing to the criticism the MD consistently attracts. To my mind, part of the problem is expectation: given that Kant refers to "the metaphysical deduction [whereby] the origin of the *a priori* categories in general was established" (B159), one naturally assumes that Kant will present an argument that demonstrates that the existence of the categories follows necessarily from the existence of the logical functions. This is not the case. Kant should have stuck to using his original term *Leitfaden*, variously described as 'clue' or 'guiding thread' in

[91] Ibid., 8.
[92] Ibid., 9.
[93] Ibid., 10.
[94] Ibid.
[95] Allison, *Kant's Transcendental Idealism*, 146.

English. This is precisely what Kant wants to do: to draw us into conceiving of the categories, in a style more associative than apodictic.[96]

The important point to keep in mind in the transition from the logical functions of judgment to the pure concepts of the understanding is that which we have stressed time and again: the functions do not pertain to objects of any kind, whether empirical or pure. These functions are, to borrow a term from Hegel, wholly *immanent* to thought. They determine the form of thought for itself: "Formal logic supplies us, as it were, with the complete theory of the general forms of thought."[97] In the Preface, Kant writes that "in logic, therefore, the understanding has to do with nothing further than itself and its own form" (Bix). If one considers judgments determined by the logical functions alone, the results are by definition without content, or *empty*. They relate to nothing in particular; they are "undetermined with respect to every object" (*Prol* 4:323). Yet Kant's concern is not with judgments which pertain to nothing in particular; his concern is with judgments that pertain to objective states of affairs, and more broadly, with the possibility of synthetic *a priori* judgments. Remember: if the concept of synthetic *a priori* judgment is intelligible, it mandates that one is capable of having knowledge, whereby the basis of such knowledge does not come directly from (within) experience. Hence, insofar as Kant wants to explain the possibility of synthetic *a priori* judgments, Kant has to demonstrate the validity of a system of logic whereby certain *a priori* rules of the understanding provide the conditions under which the objects of one's experience are determined. Therein lies Kant's Copernican revolution, and the reason for Kant's turn from general to transcendental logic. Strawson puts it thus:

> Logic offers us analytic truths about the logical relations between… forms, tells us, e.g. that if a judgment of one form is true, then a related judgment of another form must be true (or false). But it tells us nothing about the conditions under which individual judgments of different forms are empirically true, true of objects of experience.[98]

To ask 'how can the basic functions be said to have a real use?' is tantamount to asking 'how can the pure forms of the understanding relate to the objects of our experience?' Kant begins with the latter, in order to come to a thesis on the former. He reminds us of the fact that the Transcendental Aesthetic furnishes us with a pure manifold of sensibility, composed of space and time (A77/B102). This is the sensible (non-conceptual) condition of our cognition. Now, given that sensibility is essentially

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[96] In fact, and in rather comic fashion, Kant himself stipulates that insofar as what is special about the categories "is precisely that they are related to their objects without having borrowed anything from experience for their representation," the only kind of *deduction* of them possible "must always be transcendental" (A86/B118).
[97] Strawson, *The Bounds of Sense*, 75.
[98] Ibid., 78.

passive and the understanding is essentially spontaneous, Kant affirms that the understanding must act *upon* the manifold, in order to generate cognitions from it: "Only the spontaneity of our thought requires that this manifold first be gone through, taken up, and combined in a certain way for a cognition to be made out of it" (A77/B102). Kant names 'synthesis' the process or event by which the understanding achieves a collaboration with sensibility:

> By synthesis in the most general sense… I understand the action of putting different representations together with each other and comprehending their manifoldness in one cognition. Such a synthesis is pure if the manifold is given not empirically but *a priori* (as is that in space and time) (A77/B103).

Synthesis is the key to formulating the conditions under which an object is cognisable. Prior to any empirical use of our faculties, prior "to all analysis of our representations," the understanding must synthesise the pure manifold, for it is "the synthesis alone… which properly collects the elements for cognitions and unifies them into a certain content" (A77-78/B103). Now Kant makes two important claims. First, he aligns synthesis with the imagination (A78/B103). Second, he names the rule which governs the synthesis enacted by the understanding upon the pure manifold: "pure synthesis, generally represented, yields the pure concept of the understanding… Under this concept, therefore, the synthesis of the manifold becomes necessary" (A78/B104). Thus, Kant claims that before "[d]ifferent representations are brought under one concept analytically (a business treated by general logic)," the pure manifold of sensibility must be synthesised, for only then can representations be organised on the basis of this "necessary synthetic unity" (A79/B104).

Now Kant introduces the central argument of his 'guiding thread':

> *The same function that gives unity to the different representations in a judgment also gives unity to the mere synthesis of different representations in an intuition*, which, expressed generally, is called *the pure concept of the understanding*. The same understanding, therefore, and indeed by means of the very same actions through which it brings the logical form of a judgment into concepts by means of the analytical unity, also brings a transcendental content into its representation by means of the synthetic unity of the manifold in intuition in general, on account of which they are called pure concepts of the understanding that pertain to objects *a priori*... (A79/B104-105) (my italics).

Thus, Kant correlates the unity of representations within a judgment (brought about by one of the basic functions) with the unity that must exist in the manifold of sensibility before one can have a representation of any kind. To anticipate somewhat the substance of the conceptualist position we will explore later on, we can see here the germ of John McDowell's Sellarsian reading of "ostensible seeing," insofar as the basic manoeuvres of judgment are supplied by the same function that orders experience. That is, "logical form is present in both judgment and intuition due to the intellectual or conceptual

activity of the subject."[99] This is why "there arise exactly as many pure concepts of the understanding… as there were logical functions of all possible judgments in the previous table: for the understanding is completely exhausted and its capacity entirely measured by these functions" (A79/B105). It is worth stressing that how the understanding "brings its transcendental content into its representation" (i.e. synthesis) is not explained in the MD. Kant's claim is simply that such content *must be* transacted, for otherwise our understanding could not communicate with the pure manifold of sensibility, and thus nothing could arise for the subject to think logically. The rules which govern the ways in which these transactions take place are the pure concepts of the understanding. Given their isomorphism with the logical functions, the table of categories breaks down into four identical classes; their difference from the former table is spelled out in the subgroups. Under Quantity, there is Unity, Plurality and Totality; under Quality, there is Reality, Negation and Limitation; under Relation there is Inherence-Subsistence, Causality-Dependence, and Community; and finally under Modality, we have Possibility/Impossibility, Existence/Non-Existence, and Necessity/Contingency.

In conclusion, Kant uses the logical limits of thought – the basic functions – to lead us to a tabulation of the transcendental limits of cognition, namely, the pure concepts of the understanding. The former pertain to thought's internal relations, while the latter pertain to thought's necessary and determinate relation with an object. Though Kant's argument is light on detail, the pivot from logical functions to pure concepts "consists in showing that conceptual contents for judgments about objects of experience are provided only if categories guide the ordering of our representations of those objects so that we can form concepts of them."[100] Thus the Metaphysical Deduction provides the second component of Kant's model of cognitive finitude, namely, the limits of the intellect.

Part IV

How the Limits of Cognition Relate

Now that we have passed through the Transcendental Aesthetic and the Metaphysical Deduction, we can grasp the major elements of Kant's model of cognitive finitude: the sensible conditions which constitute the pure manifold of intuition, and the intellectual conditions which constitute the rules by which the manifold is synthesised into objects of experience. Given the roles attributed to the components of cognition thus far, one can conceive of human cognition as a two-storey building. At the

[99] Colin McLear, 'Two Kinds of Unity in the *Critique of Pure Reason*' in *Journal of the History of Philosophy* 53, no. 1 (2015), 84.
[100] Longuenesse, 'Kant on *a priori* concepts', 130.

top is the understanding, the source of "the spontaneity of cognition," (A51/B75) which is the faculty "for thinking," (ibid.) "for judging" (A69/B94) and, we just saw, the faculty of synthesis too. Beneath the understanding is sensibility, which provides a stable basis for the faculty above. Sensibility is characterised by "receptivity… to receive representations insofar as it is affected in some way" (A51/B75). The understanding shapes sensibility, and sensibility offers the understanding its material to shape. The next component of the model of cognitive finitude we have to explore is the manner in which the constituents of cognition are connected. Thanks to our exegesis of the MD, we understand that 'synthesis' stands at the heart of this connection. The next section will develop the role of synthesis in the Transcendental Deduction.

The Transcendental Deduction

It is uncontroversial to say that the Transcendental Deduction is the most important part of the *Critique*. No less than James Van Cleve, Jill Vance Buroker, Dieter Henrich and Patricia Kitcher have all explicitly defined it as the 'heart' of Kant's magnum opus.[101] Its significance lies in the fact that it is here that Kant demonstrates why one is obligated to conceive of the objects of experience as transcendentally determined by the pure concepts of the understanding. That is, rather than using the logical functions of judgment to establish the number and type of pure concepts which constitute the intellectual conditions of cognition, in the Transcendental Deduction Kant sets out to prove why the pure concepts must apply to experience. That this is Kant's goal would alone justify the amount of scholarship devoted to the Transcendental Deduction – however, the fact that Kant entirely re-wrote the TD from the first edition in 1781, to the next in 1787, increases the levels of scrutiny and interpretation that Kant's all-important section attracts amongst the commentariat tenfold. Given that the material is substantially different from one edition to the next, and insofar as the changes do not benefit the text with an enormous increase in clarity, most outlines – including our own – attempt to sketch the arguments of both sections, for elements can be found in both which assist in understanding Kant's highly convoluted and dense reasoning.

Why do we need a transcendental deduction in the first place? Kant wishes to put our mind at rest on this issue immediately, in the introductory passages that presage the split between A and B-version deductions. In order to prove the worth of most concepts, an empirical deduction is required,

[101] Van Cleve, *Problems From Kant*, 73; Buroker, *Kant's Critique of Pure Reason*, 103; Dieter Henrich, 'The Proof-Structure of Kant's Transcendental Deduction' in *The Review of Metaphysics* 22, no. 4 (June, 1969), 640; Patricia Kitcher, *Kant's Transcendental Psychology* (Oxford: Oxford University Press, 1990), 61.

which "shows how a concept is acquired through experience and… therefore concerns not the lawfulness but the fact from which the possession has arisen" (A85/B117). Kant refers to concepts "such as fortune and fate" as being usurped of their proper place due to the fact that they "circulate with almost universal indulgence," (A84/B117) and the implication is that if one were to deduce their meanings empirically, by tracing their use through history, and by contrasting different uses of these terms in the present, one could return some sense to them by demonstrating their origins and scope. However, certain concepts cannot be investigated on the basis of the same criteria, "since proofs from experience are not sufficient for the lawfulness of such a use," (A85/B117) by which Kant means the pure concepts of the understanding. These concepts are *a priori* and synthetic; their role is that they determine objects of experience as such, and thus to conduct a test of their validity requires a different kind of deduction: "I therefore call the explanation of the way in which concepts can relate to objects *a priori* their transcendental deduction" (ibid.). Indeed, Kant is at pains to stress the difficulty that such a deduction entails, as opposed to its empirical correspondent. The reader of the *Critique* must "understand from the outset its inevitable difficulty, so that he will not complain of obscurity where the subject-matter itself is deeply veiled…" (A88/B121). The nature of the transcendental deduction, and the reason it entails such complexity, is to establish by means of reasoning alone the fact that certain pure concepts – which have no original connection to sensibility – nevertheless determine every intuition we receive, and insofar as they do so, they determine every instance of experience we count as ours. In Kant's own word, the TD's challenge is to reveal "how subjective conditions of thinking should have objective validity, i.e. yield conditions of the possibility of all cognition of objects" (A89-90/B122).

The A-Edition

The A-edition of the Transcendental Deduction is widely pilloried amongst Kantian scholars: "Everyone agrees that the 1781 proof fails miserably."[102] It seems especially guilty of that Strawsonian bugbear, the subject of speculative psychology: after rehearsing some of Kant's conclusions in the A edition, the Englishman writes that it "is useless to puzzle over the status of these propositions. They belong neither to empirical (including physiological) psychology nor to an analytical philosophy of mind… They belong to the imaginary subject of transcendental psychology, a part of the Kantian model."[103] Moreover, the thread of the argument can often become tangled. Kemp-Smith, following in the footsteps of Hans Vaihinger, attributes the lack of coherency of the A-edition to its being pieced together by Kant using

[102] Buroker, *Kant's Critique of Pure Reason*, 106.
[103] Strawson, *The Bounds of Sense*, 97.

materials from post- and pre-Critical stages of his intellectual development, and thereby resulting in a contradictory chimera of deductive reasoning.[104] That said, the A-edition Deduction contains passages wherein some of Kant's key concepts are given their first expression. Specifically, the A-edition is important for generating two new ideas: first, Kant conceptualises the imagination as a faculty that synthesises the manifold of intuition, and second, Kant conceptualises the remit of the basic and fundamental principle of selfhood, which he names the transcendental unity of apperception. The development of these concepts, and the context within which they make sense, will orient our discussion of the A-edition Deduction. In a manner of speaking, these theoretical entities correspond respectively to the "two sides" (Axvi) of the deduction, which Kant references in the Preface to the *Critique*. "One side refers to the objects of the pure understanding, and is supposed to demonstrate and make comprehensible the objective validity of its concepts *a priori*," he writes, whereas the "other side deals with the pure understanding itself, concerning its possibility and the powers of cognition on which it itself rests; thus it considers it in a subjective relation" (Axvi-xvii). This correspondence is only approximate however, as Kant's project in the TD is demonstrate the objective validity of the categories with respect to their synthetic-guidance procedures, such that the distinction itself is rather amorphous.

Kant begins with the following insight: "if one wants to know how pure concepts of the understanding are possible, one must inquire what are the *a priori* conditions on which the possibility of experience depends" (A95-96). Considering specifically perceptual experience, Kant now stresses its *continuity*: it is typified by connectedness, coherence and progression. Our reliance on the internal harmony of the manifold of intuition is so great that its presence is simply taken for granted. If the understanding is to determine experience, one must find a way to explain this endless and continuous inter-connectivity of conscious life: in a word, one must find a way to explain the unity of experience. Kant declaims that if "every individual representation were entirely foreign to the other, as it were isolated and separated from it, then there would never arise anything like cognition, which is a whole of compared and connected representations" (A97). Kant underlines this holistic interpretation of experience on multiple occasions, for instance:

> There is only one experience, in which all perceptions are represented as in thoroughgoing and lawlike connection, just as there is only one space and time, in which all forms of appearance and all relation of being or non-being take place. If one speaks of different experiences, they are only so many perceptions insofar as they belong to one and the same universal experience (A111).

[104] Kemp-Smith, *A Commentary to Kant's Critique of Pure Reason*, 202-203.

Without unity, an experience could not take place for us. That is the central premise of the Transcendental Deduction. In order to begin to explain the coherency of experience, Kant directs our attention to the "synopsis of sense," (A 97) namely, the manner in which our intuition is unified in experience. Of course space and time have already been identified as the sensible *conditions* of experience, but here Kant's focus is on empirical intuition. Kant's theory is that this internal harmony is effected through the activity of "three subjective sources of cognition," (ibid.) alternatively referred to as the Threefold Synthesis.

The Threefold Synthesis is one of the most memorable aspects of Kant's A-edition Deduction. Before we sketch its particular functions, let's remind ourselves of what synthesis is. Consider Kant's basic definition, which remains unchanged from the first edition to the second: "By synthesis in the most general sense… I understand the action of putting different representations together with each other and comprehending their manifoldness in one cognition." (A77/B103) That said, the Threefold Synthesis entails – predictably – three moments, which one can either interpret as three separate stages of a sequence of cognitive syntheses, or else as the same cognitive synthesis but understood in three complimentary senses. More will be said on this soon – for now, let's just try to understand what Kant wants to say. These moments are named *apprehension*, *reproduction* and *recognition*. Kant introduces them with reference to the concept of spontaneity: "This is now the ground of the threefold synthesis, which is necessarily found in all cognition: that, namely, of the apprehension of representations, as modifications of the mind in intuition; of the reproduction of them in the imagination; and of their recognition in the concept" (A97). The first synthesis relates to what one might call the *local* unity of the manifold of intuition. Apprehension's synthetic activity is what allows one to grasp the perceptual field as a coherent whole, populated by discrete units arranged into their proper perspectival relations, as opposed to the chaotic flux of raw sensory impressions that Kant implies would otherwise result: "in order for unity of intuition to come from this manifold (as, say, in the representation of space), it is necessary first to run through and then to take together this manifoldness" (A99). The second synthesis permits one to carry one manifold into the next, creating a timeline or continuous sensory context through the imagination's reproduction of past representations. If the second synthesis were not to function, I would "lose the preceding representations (the first parts of the line, the preceding parts of time, or the successively represented units) from my thoughts," and the coherency of my first-order manifold wholes would be in jeopardy, producing inconsistent representations such as Kant's famous description of cinnabar "now red, now black, now light, now heavy…" (A101). The final synthesis is recognition, and it serves to crystallise the unity of the manifold under a concept. That is, the synthesis

of recognition catalyses experience insofar as it legitimates the other two syntheses by completing their orientation toward an object with the concept of that object, and thus fully *individuating* that object as the object it is. Kant immediately relates this recognitional activity with 'consciousness' – "it is this one consciousness that unifies the manifold that has been successively intuited, and then also reproduced, into one representation" (A103). For Kant the use of concepts to determine objects in one's manifold is tantamount to being conscious of the object, and if the experience of that object is unified – which it has to be, in order to be an experience at all – this implies or presupposes the *unity* of consciousness. This unity of consciousness which is presupposed by the experience of a unified manifold is alternatively referred to as 'apperception'.[105] Thus, the final synthesis involves two strains of combination: while experience can only take place in the context of a unified consciousness, the objectivity of the experience is also completed with reference to a concept, insofar as the concept acts as a guide, serving "as the rule for our cognition of outer appearances" (A106).

There you have Kant's Threefold Synthesis. *Prima facie* one understands quite well what Kant is aiming at. He identifies the fact that our sensible experience – the manifold of intuition – is continuous and interconnected in multiple ways, and he attributes the various types of unity to the effects of specific cognitive capacities, which is to say that an element of conceptuality regulates the subject's sensible experience. The syntheses of apprehension and reproduction focus heavily on the unity of the manifold of intuition, whereas the synthesis of apperception explains that the unity provided for by sense and imagination in turn relies on a unity of conceptual consciousness. Kant is attempting to demonstrate that any experience, no matter what kind of status it has as an immediate sensory input, is oriented by processes originating in the understanding. This strategy is typical of regressive transcendental arguments. According to Sebastian Gardner, such an argument proceeds as follows:

> starting from the fact that we commonsensically conceive the empirical world in such and such terms, and then inferring, on the basis of his assumption that the proper explanation of our fundamental conceptualisation of the world has Copernican grounds, what set of concepts we employ for this purpose, and what transcendental functions they serve.[106]

Thus Kant's argument for the Threefold Synthesis is regressive, insofar as he begins with the unity of sensible experience, and argues henceforth for the necessity of three cognitive syntheses.

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[105] Kant finds this expression in Leibniz, who distinguishes perception, "the internal state of a monad which represents external things," from *apperception* "which is consciousness, or the reflective knowledge of that internal state." ('Principles of Nature and Grace, Based on Reason [1714]' in *G. W. Leibniz: Philosophical Texts*, 260).

[106] Gardner, *Kant and the Critique of Pure Reason*, 80.

But that is not all. Kant now attempts to develop an aspect of the third synthesis, namely the unity of apperception. As he develops the role of apperception, the oneness of consciousness, Kant begins to move into deeper levels of abstraction, to substantiate this unity. He starts with a general statement: "Every necessity has a transcendental condition as its ground" (A106). Insofar as apperception, or the unity of consciousness, is the ultimate necessary component for one to have a possessed, conceptual experience, apperception must also be accompanied by a transcendental ground.

> A transcendental ground must therefore be found for the unity of the consciousness in the synthesis of the manifold of all our intuitions, hence also of concepts of objects in general, consequently also of all objects of experience… (ibid.).

Thus Kant introduces his concept of the subject's *transcendental* unity of apperception:

> Now no cognitions can occur in us, no connection and unity among them, without that unity of consciousness that precedes all data of the intuitions, and in relation to which all representation of objects is alone possible. This pure, original, unchanging consciousness I will now name transcendental apperception (A107).

This stage of the argument (A106-109) is both pivotal for understanding the A-edition Deduction, and undoubtedly confused. What's important to keep in mind is that Kant thinks that the unity of consciousness provides him with a bridge from the synthesised manifold of sensibility to the pure concepts of the understanding. Insofar as it is this bridge, the unity of consciousness must pertain to a more originary level of cognitive activity than was described in the third synthesis of recognition. In order to fully develop the unity of consciousness into the transcendental unity of apperception, Kant takes a step back and to the side (as it were), and approaches the topic from another angle. His starting point is the concept of *self*-consciousness. The concept of self-consciousness and its emergence in Kant's argument is partly where the confusion lies – the concept is not argued for, but assumed from the fact of consciousness, and whats worse, Kant does not use it consistently, but switches between consciousness and self-consciousness without regard for their distinction. He introduces the concept with reference to empirical consciousness: "The consciousness of oneself in accordance with the determinations of our state in internal perception is merely empirical… [it] is customarily called inner sense or empirical apperception" (A107). To be fair to Kant, to be conscious of an object is to be conscious of something that is external to oneself – thus, in any exercise of object-oriented consciousness, a self-consciousness is semantically implicit. That said, the empirical self-consciousness he brings our attention to has merely to do with our perception of our inner states – our empirical self-consciousness is sensational, intensive, changing from one moment to the next. For Kant, empirical apperception is "forever variable, it can provide no standing or abiding self in this stream of inner

appearances" (ibid.). Thus, in empirical apperception, one is a subject that treats its self as an object which varies, corresponding to the external objects distinct from itself, which in turn change as my awareness shifts from one to the next. In all of this, Kant's point is that it is difficult to understand how *one stable consciousness* can be said to emerge, which is to say that the unity posited earlier seems unlikely to be the *result* of an empirical apperception that changes all the time, as the empirical self-consciousness varies in response to the changing manifold of intuition. Thus, in order to account for the stability of our self-consciousness, Kant proposes the presence of the transcendental unity of apperception, which is 'pure, original, unchanging' self-consciousness. This is a sheer "numerical unity" (ibid.) or strict self-identity, stripped of any content. It is the pure and empty form of transcendental subjectivity, the "sole source of all unity."[107]

With the transcendental unity of apperception to hand, Kant will now bring in the pure concepts of the understanding. Kant's argument is, in short, that due to the emptiness of the identity of the transcendental unity of apperception, upon which all syntheses are grounded, the pure and originary identical I must be accompanied by *laws* of the understanding: "this transcendental unity of apperception, however, makes out of all possible appearances that can ever come together in one experience a connection of all of these representations in accordance with laws" (A108). Kant does not argue for *how* this accompaniment is supposed to take place, but simply *that it must* take place. It must take place, because if the laws of the understanding did not provide "the function by means of which this manifold is synthetically combined into one cognition," the transcendental unity of apperception could not itself arise: "the unity of consciousness would be impossible" (ibid.). This is a complex argument, so we have to watch it carefully. First of all, the law – which Kant calls here a function – does not *enact* synthesis (it is not a faculty); it is the *rule according to which* all syntheses must take place. Kant writes then that "the original and necessary consciousness of the identity of oneself is at the same time a consciousness of an equally necessary unity of the synthesis of all appearances in accordance with concepts, i.e., in accordance with rules" (ibid.): this is to say that if we accept the presence of the transcendental unity of apperception – if that concept is coherent – we must also accept the presence of rules or 'concepts' which guide the operation of our syntheses. Kant writes:

> for the mind could not possibly think of the identity of itself in the manifoldness of its representations, and indeed think this *a priori*, if it did not have before its eyes the identity of its action, which subjects all synthesis of apprehension (which is empirical) to a transcendental unity, and first makes possible their connection in accordance with *a priori* rules (ibid.).

[107] Kemp-Smith, *A Commentary to Kant's Critique of Pure Reason*, 208.

If we did not possess certain *a priori* rules by which to organise syntheses, syntheses would be impossible, and they would not take place. With respect to the transcendental unity of apperception, Kant's point seems to be that whilst the pure and original self-consciousness is a transcendental condition of experience (insofar as it precedes experience, and provides the stable basis from which all cognitive syntheses take place), it does not 'contain' rules for ordering experience *a priori*. It is simply a brute fact of our mental constitution, the empty I that is identical with itself. In order for any experience to be an experience, certain rules which dictate the forms of syntheses that can occur, and which in turn organise experience into a coherent unity, must be in place *a priori*. If not, even the transcendental unity of apperception would be insufficient for experience to arise. These rules, functions, laws or concepts (a multiplicity of terms which compounds the reader's confusion) can be nothing other than the categories of the understanding.

Before we move forward, a note of caution. I have presented the argument as best as I can, but Kant's writing is haphazard, and there are some who would disagree with this interpretation. One such person is Norman Kemp-Smith. According to Kemp-Smith, the rules, functions, laws or concepts, which I have equated with the categories, are not pure but only empirical. I cannot see why Kemp-Smith holds this view, especially in light of the fact that he immediately criticises Kant on the basis of the unintelligibility of this interpretation. That is, Kemp-Smith writes that "Such a view of the function of general concepts renders unintelligible their own first formation. For as they are empirical, they can only be acquired by conscious processes that do not involve them."[108] That is, Kemp-Smith correctly identifies the fact that if one attributed the organisation of *a priori* syntheses to empirical concepts, one falls foul of contradiction: "How through a consciousness that is not yet unified can general concepts be formed?"[109] To our mind Kant does not fall into this trap, for he is conscious of the argument that Kemp-Smith employs to criticise him. And to be fair to Kant, though his pleonasm is the root and cause of all misinterpretation, the synonyms he uses are explicitly tied to the *pure* use of the understanding. 'Function' (*Funktion*) carries connotations of the logical functions of the understanding, and in the rare instance that Kant employs the term otherwise, it is used in the sense that it stands *apart* from, rather than being generated by, sensible experience: e.g. when Kant is discussing the obstacle presented by common-sense to his theory of intellectual conditions, he claims that "The categories of the understanding… do not represent to us the conditions under which objects are given in intuition at all,

[108] Ibid., 210-211.
[109] Ibid., 211.

hence objects can indeed appear to us without necessarily having to be related to functions of the understanding" (A89/B122); and far later in the text, in the context of schematism, he writes that "the category contains the function, unrestricted by any sensible condition, of their unity, as of a synthesis in general" (A181/B224). 'Law' (*Gesetz*) is also a term that rarely conveys an empirical origin. At A110, Kant refers to "the transcendental law that all appearances, insofar as objects are to be given to us through them, must stand…," at A111 he refers to "universal and necessary laws," and at A113 he speaks of the "law of nature" and "constant laws." And finally, whatever one might think of law and function, Kant's use of the term "*a priori* rules," (A108, A110) should be enough to lay Kemp-Smith's doubt to rest.

Thus, though the path is beset on all sides by an absence of rigorous argumentation, the general outline of Kant's argument should be clear. First, he asserts that the central defining tenet of experience is its unity. Second, he explains that this unity can only be the result of cognitive syntheses, the last and highest-functioning of which is the subject's capacity to synthesise the manifold of intuition through a conceptual consciousness. Third, the presence of conceptual consciousness in turn implies that the rational agent possesses at least an *empirical* self-consciousness. Fourth, insofar as empirical self-consciousness and consciousness of objects external to oneself could never result in a stable, unchanging self-consciousness, we have to attribute to the latter a transcendental ground, namely the transcendental unity of apperception. Fifth and finally, though the transcendental unity of apperception is absolutely fundamental, it is empty; thus, we must assign to the laws that govern the syntheses which determine our experience a transcendental content also, and these are precisely the categories of the understanding.

The B-Edition

Ever since Dieter Henrich's seminal paper 'The Proof-Structure of Kant's Transcendental Deduction' (1969), the dominant trend within Kantian scholarship has centred around some variation of Henrich's 'two-step proof' model to explain Kant's procedure in the B-edition Transcendental Deduction. Henrich's interpretation was motivated by the seeming similarity of two conclusions reached in the development of the B Deduction: the first comes at the end of section 20, stipulating that "the manifold in a given intuition also necessarily stands under categories" (B143); the second comes at the end of section 26, whereby Kant concludes that "all synthesis, through which even perception itself becomes possible, stands under the categories, and since experience is cognition through connected perceptions, the categories are conditions of the possibility of experience…" (B161). Given that a superficial comparison of these two conclusions yields little difference, Henrich held that many have been "tempted to see two

proofs of the same proposition in the text of the second edition."[110] Such a temptation must be avoided however, otherwise one transgresses against Kant's explicit instruction to conceive of the arguments as separate, and sequentially dependent. At B144-145, Kant refers to the conclusion of section 20 as "the beginning of a deduction of the pure concepts of the understanding." This beginning is in turn *completed* in

> the sequel (§26) [where] it will be shown from the way in which the empirical intuition is given in sensibility that its unity can be none other than the one the category prescribes to the manifold of a given intuition in general...

Consequently Henrich developed an interpretation to demonstrate that "sections 20 and 26 offer two arguments with significantly different results, and that these together yield a single proof of the Transcendental Deduction. We shall call this task the problem of the two-steps-in-one-proof."[111] The distinction that galvanised Henrich's 'two-step proof' applies to the *unity* of intuition: according to Henrich, the "result of the proof in section 20 is… valid only for those intuitions which already contain unity," whereas "the second part of the Deduction will show that the categories are valid for *all* objects of our senses."[112] That is, the first part of the B Deduction functions as proof that unified intuitions are subject to the categories, whereas the second part functions as proof that every representation, without exception, is subject to the categories, therefore demonstrating "the *unrestricted* validity of the categories for everything which can be meaningfully related to experience."[113]

That Henrich's paper is canonical for its advancement of the 'two-step proof' model is assured, however the substance of the distinction that motivates the interpretation is still very open to debate. According to Allison, Henrich's interpretation is vulnerable to two criticisms. On the one hand, Henrich's distinction seems to operate on the distinctly problematic assumption that intuitions can possess unity *before* their determination by the understanding. And on the other hand, the sequence of Henrich's 'two-step' model is "counter-intuitive," insofar as Kant "clearly states that the first part is concerned with the relation between the categories and the manifold of sensible intuition in general and the second with their relation to objects of human sensible intuition."[114] Hence the order of Henrich's arguments, ranging from the narrow application of the categories to the broad, is in direct contrast with Kant's own statements. As a result Allison develops his own 'two-step proof' model, which follows the

[110] Henrich, 'The Proof-Structure of Kant's Transcendental Deduction', 641.
[111] Ibid., 642.
[112] Ibid., 645-6.
[113] Ibid., 646.
[114] Allison, *Kant's Transcendental Idealism*, 161.

form of Henrich's interpretation but not the substance. According to Allison the conclusion of section 20 pertains to the role that the categories play "as rules for the *thought* of an object of sensible intuition in general, that is, as discursive rules for judgment," whereas the aim behind the culmination of section 26 is "to link the categories (albeit indirectly) to the *perception* rather than merely the *thought* of objects."[115] Alternatively put,

> [the first] step attempts to demonstrate the *objective validity* of the categories, to show that they are required for thinking about objects. The second step argues that the categories apply necessarily to objects of experience, and thus has *objective reality*.[116]

Apart from the fact that Allison's interpretation circumvents the issues one can find in Henrich's model, his version of the two-step proof is beneficial for two reasons. First, it is simple. Simplicity which does come at the cost of conceptual rigour is a sought-after quality when considering scholars' explanations for what Kant wrote and why. Second, it delivers a sense of continuity within the progression of the *Critique* that is often lacking, for according to the substance of Allison's distinction, Kant's first step is comparable to a re-elaboration of the arguments made by the Metaphysical Deduction and A-edition Transcendental Deduction together, though notably in reverse order. Remember: in the Metaphysical Deduction Kant sought to outline the logical functions of judgment – the fundamental operations of abstract thought – to guide us in our understanding of the nature and number of the categories. The logical functions were conceived apart "from all content of cognition, i.e. from any relation… to the object," such that they represent "only the logical form in the relation of cognitions to one another, i.e. the form of thinking in general" (A55/B79). Then in the A-edition Transcendental Deduction, one of the central concepts Kant developed was that of the transcendental unity of apperception. This unity is the empty and formal identical I that must underpin all empirical experience of objects, for otherwise the self that claims and organises its objective experiences as 'my own' would not exist. Allison's interpretation integrates both of these arguments into the first step of the B-edition Deduction, and in so doing, builds upon each.

[115] Ibid., 162.
[116] Buroker, *Kant's Critique of Pure Reason*, 117.

The First Step: §15-20

Kant begins the B-edition TD with a summary discussion of synthesis *qua* combination. Whatever one might think of the validity of his theory, [117] Kant's position regarding the understanding's sole operational capacity for synthesis is clear:

> the combination (*conjunctio*) of a manifold in general can never come to us through the senses, and therefore cannot already be contained in the pure form of sensible intuition; for it is an act of the spontaneity of the power of representation, and… one must call the latter understanding, in distinction from sensibility (B129-130).

That said, the first step of the TD only really gets going in §16, with mention of the transcendental unity of apperception. Indeed it is here one comes across one of the most memorable passages to be found in the *Critique*: "The I think must be able to accompany all my representations; for otherwise something would be represented in me that could not be thought at all, which is as much as to say that the representation would either be impossible or else at least would be nothing for me" (B131-132). This sentence has stimulated much discussion about the *modality* of Kant's claim, for to interpret the claim as being 'the I think must *always* accompany all my representations' entails further assertions about the nature of cognition (which are not necessarily insuperable), such as denying a contributive role to the unconscious in experience. After all, whatever one's allowance is for an unconscious component in human cognition, the unconscious is defined by the absence of a concrete 'I think'. That said, commitment to a (differently) complex theory of cognition is not necessary if one focuses on the phrase "must *be able*," which is to say that Kant necessitates only that it must be *possible* for the 'I think' to accompany my representations – for if it were impossible, then *ipso facto* it would be "nothing for me." More importantly for our purposes, Kant identifies this *necessity* of the possibility of an I think accompanying all our representations with the position of the transcendental unity of apperception, "because it produces the representation I think" (B132). For the remainder of §16 and the majority of §17 and §18, Kant cycles through an argument that we are familiar with thanks to the A-edition TD. The fact of empirical consciousness, which is a consciousness of the object in intuition, obliges one to attribute to oneself a self-consciousness, for there is no relation to external sensibility without presupposing what relates to external sensibility (the I). This empirical self-consciousness in turn presuppose a *transcendental* ground of the unity of this self-identity, "for otherwise I would have as

[117] Kemp-Smith writes that this claim amounts to "a fundamental assumption which Kant does not dream of questioning and of which he nowhere attempts to offer proof." See his *A Commentary to Kant's Critique of Pure Reason*, 284.

multi-coloured, diverse a self as I have representations of which I am conscious" (B134). Thus, from the "analytical unity of apperception" – by which Kant means the identity of one's consciousness across different representations – we are obliged to posit the existence of "some synthetic one" (B133-134). The transcendental ground of the synthetic unity of apperception is thus a prerequisite not only for empirical self-consciousness, but empirical *objective* consciousness. That is, for the manifold of intuition to become coherent, which is to say to guarantee the possibility of its becoming an *intuition per se*, the manifold must be synthesised and thereby depends upon the transcendental unity of apperception: "[t[he supreme principle of all intuition in relation to the understanding is that all the manifold of intuition stand under conditions of the original synthetic unity of apperception" (B136). Insofar as the synthesis of the manifold relies squarely on the transcendental unity of apperception, Kant is now secure to proffer a new definition of the faculty of the understanding (the seat of apperception): "Understanding is, generally speaking, the faculty of *cognitions*. These consist in the determinate relation of given representations to an object" (B137) (my italics). At this stage of the argument, it's important to specify what the status of this 'object' of intuition is. "An object, however, is that in the concept of which the manifold of a given intuition is united" (ibid.) This (temporary) definition of the object is what substantiates Allison's characterisation of the first step of his interpretation, for here Kant

> in effect defines an object as whatever is thought as a unified manifold by means of a concept. The object here is the object of thought; the definition establishes that it must be a complex whose parts (the manifold) are unified by a concept.[118]

Thus Kant asserts the necessary relation between the transcendental unity of apperception, the manifold of intuition, *and the concept* of an object in that manifold, whereby the concept is the vehicle by which this *objective* thought is gathered: "The transcendental unity of apperception is that unity through which all the manifold given in an intuition is united in a concept of the object" (B139). That is, after demonstrating that the transcendental unity of apperception is necessary to ground the synthesis of any representational state, whether conceptual or sensible, he states that the synthesis of the manifold of intuition which is necessary for the latter to produce an object of cognition involves concepts. "Put less technically, Kant has argued that when one unifies some manifold by means of a concept, one thereby renders the manifold *thinkable* as an object or gives it objective validity."[119] At §19 Kant progresses significantly, moving in the direction covered by the Metaphysical Deduction: he writes that "a judgment is nothing other than the way to bring given cognitions to the objective unity of

[118] Buroker, *Kant's Critique of Pure Reason*, 122.
[119] Ibid.

apperception" (B141). By 'objective unity', Kant means the "the necessary relation of the manifold of intuition to the one I think… which grounds *a priori* the empirical synthesis" (B140). Thus Kant stipulates that a judgment is the *articulation* of the cognitive synthesis (conceptually determined intuition) in original apperception. That is, "synthesis is equivalent to judging; in judging one conceives a manifold as related in a way that can be asserted to obtain."[120] For Allison, Kant's identification of the act of judging with the synthesis of the manifold under a concept (grounded by the transcendental unity of apperception) is greatly welcome, and clarifies retroactively portions of the B Deduction:

> In particular, it helps us to understand better Kant's insistence not only on the necessity of a synthesis but also on the consciousness thereof, which seemed so puzzling when initially presented. Looking back… it becomes clear that the synthesis to which Kant there referred was nothing other than the act of judgment."[121]

Furthermore, Kant's identification of the act of judgment with the synthesis constitutive of the cognitive object leads us easily into discussion of the categories at §20, for judgment "must also be viewed as norm governed"[122] insofar as its functions determine the kind of synthesis it effects. "That action of the understanding… through which the manifold of given representations (whether they be intuitions or concepts) is brought under an apperception in general, is the logical function of judgments" (B143). But as we know from the MD, if functions determine *cognition* as opposed to the immanent representations of thought (merely formal, logical objects, without relation to sensibility), then the functions take on a new aspect, for "the categories are nothing other than these very functions for judging, insofar as the manifold of a given intuition is determined with regard to them" (ibid.). Thus ends Kant's argument for the necessity of conceiving of the objects of determinate thought as being conditioned by the categories. Before we move to the second step, it should be clear that, though the end of the first step of the B Deduction covers similar terrain to the MD, the result takes what the latter had merely assumed and devises a comprehensive argument to affirm its transcendental commitments. That is, the B Deduction "takes us beyond the Metaphysical Deduction by offering grounds to support what the latter was forced to assume, namely, that the understanding has a real (as opposed to a merely logical) use, through which it introduces a 'transcendental content' into its representations."[123]

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[120] Ibid., 125.
[121] Allison, *Kant's Transcendental Idealism*, 176.
[122] Ibid.
[123] Ibid., 177.

The Second Step: §21-26

Now we truly move into the bedrock of Kant's critical project. In the previous, Kant's purpose was to "abstract from the way in which the manifold for an empirical intuition is given, in order to attend only to the unity that is added to the intuition through the understanding by means of the category" (B144). That is, Kant's purpose was to reveal the necessity for conceiving of the object of *cognition* as categorially conditioned. Insofar as he achieved this, Kant demonstrated that in order for us to determinately think an object, the object must be unified in accordance with the categories. What he has not demonstrated is that any object, if merely *perceived*, must also abide by the categories in order to *be* an object *of intuition*. Therefore he will now show "from the way in which the empirical intuition is given *in sensibility* that its unity can be none other than the one the category prescribes to the manifold of a given intuition in general" (B144-145). That is, Kant is to reveal that the object of *experience* - the spatio-temporal manifold – must also fall under the categories.

The development of the argument in the second step is – in one sense – simpler than the first, insofar as the argument is really comprised of only two sections. The first significant section is §24, wherein Kant discusses the role of the transcendental imagination. As we know, Kant introduced this concept in the Metaphysical Deduction where he described it enigmatically as "a blind though indispensable function of the soul" (A78/B103). Then he developed it in the A-edition TD as the second member of the Threefold Synthesis, which maintained constancy across a sequence of sensible manifolds. He also distinguished between the *productive* and *reproductive* syntheses of the imagination such that the former is *a priori* and the latter empirical (A118-121). In the A-edition, the imagination possesses a liminal quality; sometimes it seems to be an informal power of the mind (like memory), at other times it seems a faculty proper, but even when conceived in the latter sense its function is merely combinatory, standing on the threshold between sensibility and the understanding: "Both extremes, namely sensibility and understanding, must necessarily be connected by means of this transcendental function of the imagination" (A125). In the B Deduction, Kant employs the concept in a more surefooted manner: the transcendental imagination facilitates the application of the categories to the sensible conditions of experience, namely, space and time.

To begin, Kant says that there are two distinct kinds of syntheses we need to be aware of. The first is the one covered by the first step of the B Deduction: synthesis of the manifold of intuition under

the direct guidance of the understanding, which Kant now calls "*synthesis intellectualis*" (B150).[124] This account, though pivotal, still gives too much weight to the "mere forms of thought" and doesn't sufficiently embed the categories in the constitution of our first-level experience of the manifold of intuition (ibid.). According to Kant then, the requisite "synthesis of the manifold of sensible intuition" is accomplished by "the transcendental synthesis of the imagination," which he also refers to as "the figurative synthesis" and "*synthesis speciosa*" (B151). In order to substantiate this significant theoretical manoeuvre, Kant introduces his newest definition of the imagination: "Imagination is the faculty for representing an object even without its presence in intuition" (ibid.). This definition retains some continuity with how Kant characterised imagination in the Threefold Synthesis, insofar as there it had a suturing effect, alloying absent with present stages of the manifold: preserving the past and projecting the present into the future. Now, Kant brings to the fore what in the A-edition TD had been implicit, namely, the imagination's constitution of *temporality*. Time, of course, is one of the *a priori* forms of sensibility, and specifically the form of inner sense. If you cast your mind back to the Metaphysical Exposition of these forms, Kant insisted that time and space were singular continuums, such that every particular spatio-temporal perception was merely a part, a limitation, of an infinitely great tapestry, every moment a piece of eternity. Imagination is the key in synthesising this temporal model of moments-in-eternity: "in order to represent a determinate time, we must be able to represent past and future times that are not 'present' and ultimately the single time of which they are parts."[125] That is, the imagination as Kant conceives it has an interpretive quality, as though it possessed a logical structure somewhere between rational inference and visual experimentation. Indeed, Kant remarks that we cannot even *represent* time

> without, in drawing a straight line (which is to be the external figurative representation of time), attending merely to the action of the synthesis of the manifold through which we successively determine the inner sense, and thereby attending to the succession of this determination in inner sense (B154).

The example of line-drawing is significant insofar as it demonstrates that one cannot directly perceive time, yet nor does one simply think it. For Kant the interpretive quality of the imaginative synthesis, which determines pieces of the temporal manifold while also projecting their extension beyond the immediate, is the reason it must be conceived of in terms of the categories. For the categories are the rules by which any spontaneous synthesis must function. Hence, and in alignment with the A-edition,

[124] Burnham and Young, *Kant's Critique of Pure Reason*, 95-96.
[125] Ibid., 190.

Kant calls the properly transcendental component of imaginative synthesis *productive*, insofar as it is spontaneous, generative and a necessary condition for what Buroker calls "global time in its entirety."[126] Now it must be stated that, though the substance of Kant discussion is centred on time, Kant's argument concerns both sensible conditions of cognition, viz. time *and space* – the imaginative synthesis discriminates amongst and projects spatial infinitude as much as it does temporal. As a result Kant contends that the imagination "belongs to sensibility," insofar as it "alone… can give a corresponding intuition to the concepts of the understanding," and at the same time it acts "in accordance with the categories" of the understanding, insofar as it *spontaneously* determines "the form of sense *a priori* in accordance with the unity of apperception" (B151-152).[127] Ultimately, what Kant takes it that he has proved is that the categories are necessary constitutive rules for the unification of the *a priori* forms of intuition.

The second (and shorter) significant section of the B Deduction's second movement is §26. In this section, Kant discusses

> the possibility of cognising *a priori* through categories whatever objects may come before our senses, not as far as the form of their intuition but rather as far as the laws of their combination are concerned, thus the possibility of as it were prescribing the law to nature and even making the latter possible, is to be explained (B159-160).

Or to use Allison's words:

> Although the connection of the categories with the forms of sensibility through the transcendental synthesis of the imagination is undoubtedly the pivotal step of the argument, it does not of itself suffice to secure the goal of the Deduction. This requires demonstrating that the categories stand in a necessary connection with *empirical* intuition.[128]

Kant begins with what he calls "the synthesis of apprehension" (B160). This phrase has also been prefigured in the A-edition, though the relationship between its use there and here is not perfectly symmetrical. The synthesis of apprehension is "the composition of the manifold in an empirical intuition, through which perception, i.e. empirical consciousness of it (as in appearance), becomes possible" (ibid.). According to Burnham and Young, Kant's definition of perception "is something like, then, the empirical consciousness that *something has appeared to me*," which is reminiscent of Kant's

[126] Buroker, *Kant's Critique of Pure Reason*, 129.
[127] If this argument leaves you frustrated, you are not alone. Allison notes: "Kant's treatment of this issue is extremely perfunctory. Instead of providing an argument, he simply asserts that the imaginative synthesis is an expression of the spontaneity of thought." (*Kant's Transcendental Idealism*, 191).
[128] Ibid., 193.

initial claim about the 'I think' accompanying my representations.[129] By arguing for the relevance of the categories upon one's perception, Kant provides a contrast with his thesis in the *Prolegomena*, whereby he distinguishes judgments of experience from judgments of perception precisely on these grounds (*Prol* 4:298).[130] That said, the central argument employed by Kant about the synthesis of apprehension is that the rules governing its synthetic unification must be the same as those governing the synthetic unification by the transcendental imagination of the forms of intuition. He substantiates this correlation by affirming that "space and time are represented *a priori* not merely as forms of sensible intuition, but also as intuitions themselves (which contain a manifold), and thus with the determination of the unity of this manifold in them…" (B160). That is, Kant states that not only are space and time the forms of intuition, but are themselves intuitions containing a synthesised manifold, to which he gives the name "formal intuition," in the infamous footnote below (B161n). His point is that, insofar as our *formal* intuitions are de facto unified, this unification is due to the processing of the categories: "But this synthetic unity can be none other than that of the combination of the manifold of a given intuition in general in an original consciousness, in agreement with the categories, only applied to our sensible intuition" (B161).

Thus comes to a close the major development of Kant's *Critique*, which began with the problem of the possibility of synthetic *a priori* judgments, and culminates with the B-edition Transcendental Deduction. Clearly the significance of Kant's text transcends these opening chapters, but they are arguably the most pivotal in the context of his Critical philosophy. By the end of the Deduction, Kant's theory of the sensible and intellectual conditions of the possibility of experience has been fully instituted. He has established the limits of cognition, and provided a deft theory, not without its challenges, for the intricacies of their co-operation. As for our purpose, the hardest work has been done. Next, we will concentrate on interrogating Kant's achievement with reference to a debate that aims precisely at our concern: the nature of cognitive finitude.

[129] Burnham and Young, *Kant's Critique of Pure Reason*, 98.
[130] Kant writes that the latter "are only subjectively valid" and "do not require a pure concept of the understanding, but only the logical connection of perceptions in a thinking subject."

Part IV

Conceptualism

We have presented the terms of Kant's theory of cognition in the way he introduces them: as equivalent components of an inter-dependent discursive whole. In recent years, however, a debate has emerged amongst those seeking to clarify the nature of the relation of the components of cognition. The debate is fixed upon the problem of *parity* between sensible and intellectual conditions of cognition. Some have claimed that a substantial parity exists, with each faculty participating equally in a democratic cognitive process, whereas others see that claim for parity as misjudged. According to the latter school of thought, parity is an illusion produced by Kant's desire for architectonic symmetry, and that by necessity, the sensible component of cognition is beholden to the intellectual component. According to the terms of the present debate, the former position is attributed to *nonconceptualism* whereas the latter is attributed to *conceptualism*. Insofar as the former camp initiated the debate, their basic argument set the terms as it stands today. The nonconceptualist position can be summarised in brief: according to proponents of the theory, sensibility is an autonomous faculty and the matter it contributes to cognition (independently of the understanding) is what they refer to as 'nonconceptual particulars'. Depending on the strength of the proponent's nonconceptualist commitment, these particulars are either strictly synonymous with 'intuitions' (strong nonconceptualism) or are substantive contributions to the manifold of intuition (weak nonconceptualism).[131] Whatever the case, the argument is that sensibility provides a content for cognition "independently of our applying, or having the ability to apply, concepts, and in particular the categories, to these particulars…"[132] Given our discussion thus far, the terms of this debate clearly revolve around the status of discursivity: conceptualists tend to devitalise the role of sensibility in our cognition, whereas the nonconceptualists tend to radically empower it.

Lucy Allais and Robert Hanna were the original proponents of the nonconceptualist position. Writing papers in the mid-2000s, Hanna and Allais sought to highlight a discrepancy they noted between local arguments employed in the text of Kant's *Critique* and the accepted interpretation of the opening chapters' cumulative argument. Following quickly on their heels were scholars such as José Luis Bermúdez, Sacha Golob, Christopher Peacocke, Dennis Schulting, and Colin McLear, for each of whom the orthodox Kantian interpretation had become tiresome. Primarily, the nonconceptualists attributed

[131] This distinction is adjacent to Jeff Speaks' distinction between absolute and relative nonconceptualism. See his 'Is There a Problem about Nonconceptual Content?' in *The Philosophical Review* 114, no. 3 (July 2005): 359-398.
[132] Allais, 'Kant, Non-Conceptual Content, and the Representation of Space', 384.

the legacy they sought to overcome to the writings of Wilfrid Sellars and John McDowell. In the former's famous John Locke Lectures of 1966, one can see the nascent stirrings of this debate:

It is tempting to think that Kant's distinction between the representations of the understanding and the representations of sensibility is essentially the same as that which many philosophers have drawn *between conceptual and non-conceptual representations*… Yet an examination of the use to which Kant puts his distinction soon makes it evident that while there is something to this interpretation, there is little which is 'clear cut' about the way the distinction is drawn.[133]

From the perspective of Allais et al, Sellars' conceptualist credentials are best expressed in his rejection of the 'Myth of the Given'. In *Empiricism and the Philosophy of Mind* (1997), Sellars clarifies what this Myth consists in:

there are various forms taken by the Myth of the Given… but they all have in common the idea that the awareness of certain sorts – and by 'sorts' I have in mind, in the first instance, determinate sense repeatables – is a primordial, non-problematic feature of 'immediate experience'.[134]

For James R. O'Shea, Sellars's attack on the Myth of the Given amounts to a rebuttal of the following perceptual-realist argument:

since not all of our knowledge can be derived by inference from prior knowledge *ad infinitum*, there must be some basic items of knowledge which are simply 'given' in roughly the sense that they are (allegedly) known directly or immediately without presupposing our possession of any other knowledge.[135]

More succinctly, one can say that Sellars argued against "the idea that empirical knowledge rests on a 'foundation' of non-inferential knowledge of matters of fact."[136] Sellars' influence was (and continues to be) widespread.[137] The impact of his writing is pervasive throughout epistemology, philosophy of mind and, of course, "the interpretation of Kant's philosophy."[138] For our current purposes, the most notable philosopher influenced by Sellars' approach to Kant was John McDowell. "McDowell uses the twentieth-century Kantian Wilfrid Sellars as a guide for his reading of Kant," and "taking his cue from Sellars, sets

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[133] Wilfrid Sellars, *Science and Metaphysics: Variations on Kantian Themes* (London: Routledge & Kegan Paul, 1968), 2. My emphasis.
[134] Wilfrid Sellars, *Empiricism and the Philosophy of Mind* (Cambridge, MA: Harvard University Press, 1997), 59.
[135] James R. O'Shea, *Wilfrid Sellars: Naturalism with a Normative Turn* (Cambridge: Polity Press, 2007), 19.
[136] Ibid., 15.
[137] See James R. O'Shea's introduction to his edited collection, *Sellars and his Legacy* (Oxford: Oxford University Press, 2016). O'Shea begins: "Over the last two decades the influence of Wilfrid Sellars… on contemporary philosophical debates about mind, meaning, knowledge, and ontology has accelerated to such a degree that it no longer seems necessary to justify the claim that he was, and will remain, one of the most important philosophers of the twentieth century." (1)
[138] Anil Gomes, 'Kant, the Philosophy of Mind, and Twentieth-Century Analytic Philosophy' in *Kant and the Philosophy of Mind*, eds. Gomes & Stephenson (Oxford: Oxford University Press, 2017), 21.

himself against all varieties of the Myth of the Given."[139] At the beginning of *Mind and World* (1994) McDowell employs Kant's remark at A51/B75 on the co-dependence of concepts and intuitions to lead "into talking about how the idea of the Given figures in a thought about the grounding that entitles some empirical judgments to count as knowledgeable."[140] Almost immediately, McDowell denounces the nonconceptual, non-inferential Given, judging that it "is useless for its purpose."[141]

Our aim is not to develop McDowell's Sellarsian reading of the Given, but to contextualise the emergence of nonconceptualism. Nevertheless, two brief points can be made here. First, McDowell asserts that empiricist foundationalism is epistemologically unsound. In the early passages wherein he negotiates with the philosophy of Donald Davidson, McDowell affirms that "if we conceive experience in terms of impacts on sensibility that occur outside the space of concepts, we must not think we can appeal to experience to justify judgments or beliefs. That would be to fall into the Myth of the Given."[142] This claim is echoed by McDowell in a later text, when he stipulates that Sellars' "master thought" is that "the conceptual apparatus we employ when we place things in the logical space of reasons is irreducible to any conceptual apparatus that does not serve to place things in the logical space of reasons."[143] Second, McDowell asserts that even basic episodes of perception have to be conceptually-oriented. Take for instance an episode of visual perception, which McDowell – following Sellars – calls *ostensible seeing*. Episodes of ostensible seeing are simply "experiences in which it looks to their subject as if things are a certain way."[144] An example: 'this red cube in front of me'. According to McDowell's reading of Sellars, episodes of ostensible seeing are related to the subject-predicate structure of Kantian judgments because they *contain claims*, not least insofar as a perceptual experience of a red cube is *not* a pyramid and *not* blue. Thus one's everyday perceptual experience is constituted by "non-overt conceptual episodes."[145] It is not that McDowell wants to obliterate the distinction between two episodes of consciousness. No one could mistake the fact that *making a judgment* that things are as they look is not the same as *perceiving* that things are as they look. Rather, the Kantianism that both Sellars and McDowell promote is that the complexity of basic perceptual experience necessitates an

[139] Richard J. Bernstein 'McDowell's Domesticated Hegelianism' in *Reading McDowell: On Mind and World* (London: Routledge, 2003), 10-11.
[140] John McDowell, *Mind and World* (Cambridge, MA: Harvard University Press, 2000), 6.
[141] Ibid., 7.
[142] Ibid., 14.
[143] John McDowell, *Having the World in View: Essays on Kant, Hegel and Sellars* (Cambridge, MA: Harvard University Press, 2009), 4-5.
[144] Ibid., 10.
[145] Ibid., 11.

underlying *proto-conceptual* discrimination. "In visual experiences conceptual capacities are actualised with suitable modes of togetherness; this is how we cash out the idea that the episodes 'contain' claims."[146] According to McDowell, in order to overcome the fallacy of the Given we have to "recognise that the world's impressions on our senses are already possessed of conceptual content."[147] In more Kantian terms, McDowell's vision of the *Critique* argues "that the spontaneity of our thought must somehow *internally* be seen to be linked to our empirical experiences, as already operative in the deliverances of sensibility, for experience to provide justifications of our beliefs."[148] Such is the general trend of Kant commentary that the nonconceptualists wish to supersede.

Nonconceptualism and Synthesis

Pace Sellars and McDowell, "the nonconceptualist interpretation… holds that intuitions can present us with empirical objects without any application of concepts."[149] According to Allais et al, many of Kant's primary claims regarding the nature of cognition become meaningless if the conceptualist orthodoxy is maintained. Lucy Allais draws our attention to various spatial claims made by Kant in the Aesthetic. Consider A23/B39:

> Space is not an empirical concept that has been drawn from outer experiences. For in order for certain sensations to be related to something outside me (i.e. to something in another place in space from that in which I find myself), thus in order for me to represent them as outside and next to one another, thus not merely different but as in different places, the representation of space must already be their ground.

According to Allais, the dominant reading of Kant's model of cognition "makes it difficult to make sense of this claim."[150] After all, if the coherency of one's perception (of space) is a result of the operation of our conceptual faculty, why does Kant stress that space is both nonconceptual and the ground of nonconceptual sensations? That's not the only question Allais' textual analysis poses to the conceptualist reading, which the latter seems hard-pressed to answer. She locates yield-points in the arguments of notable scholars Paul Abela and Sally Sedgwick, whereby the two – following in McDowell's footsteps –describe Kant's *Critique* as a project to disenfranchise sensible data of any meaningful epistemic role. Take Sedgwick for instance: "What we learn from the transcendental deduction is that the 'raw' or unsynthesised data of sensation is not a possible object of thought for us;

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[146] Ibid., 13.
[147] McDowell, *Mind and World*, 18.
[148] Dennis Schulting, 'Introduction' in *Kantian Nonconceptualism*, ed. Dennis Schulting (London: Palgrave Macmillan, 2016), vi.
[149] Anil Gomes, 'Kant on Perception: Naïve Realism, Nonconceptualist, and the B-Deduction' in *The Philosophical Quarterly* 64, no. 254 (January, 2014), 2.
[150] Allais, 'Kant, Non-Conceptual Content and the Representation of Space', 384.

it therefore has no role to play in the justification of our empirical judgments."[151] According to Allais Kant's critique of Lockean and Humean empiricism is undisputed, but it cannot be extended to encompass intuition per se. The true target of Kant's anti-empiricism is what Kant calls *sensations*, which we examined in our opening exegesis of the Aesthetic. And if one accepts that there is a distinction between sensation and intuition, one cannot simply distinguish the latter from the former by attributing to intuitions a conceptual content; for "if the difference between sensations and intuitions were that intuitions involve concepts, then Kant would not define intuition… in opposition to concepts."[152] Ultimately, Allais and Hanna both locate the crux of the interpretive tension in the concept of *synthesis*. The nonconceptualists concur that synthesis is required to produce the kind of coherent sensible representation Kant calls intuitions, but they reject the idea that all forms of synthesis are manifestations of the understanding's activity, seeking instead to give some significance to the idea of a *para-conceptual* synthesis. Critically, they each stress that, given the model of the Threefold Synthesis in the A-edition Transcendental Deduction, only the third and final kind of synthesis (recognition) "explicitly involves concepts."[153] The other two syntheses (apprehension and reproduction) are attributed to the power of imagination, and imagination, as we stated earlier, is liminal – not quite under the auspices of either sensibility or understanding. For Allais this ambiguity is enough to undermine the certainty of conceptualists, but Hanna makes far more hay from the first two syntheses. He writes that sensibility is "only *relatively* passive, but not *entirely* passive… by virtue of its expressing a mental power for spontaneous synthesis, or mental processing," which in turn is "said to have a single… innate psychological ground in the 'transcendental' or 'productive' imagination, which carries out the operation of 'figurative synthesis' or *synthesis speciosa*."[154]

While Allais and Hanna's nonconceptualist readings possess merit – especially in resisting an all-too overt *mentalist* interpretation of Kant's idealism which amounts to a conceptually monist view of cognition – their writing never really gains enough traction to succeed in the manner they want. Though they aim to separate intuition from the *pure* concepts of the understanding, the most they do is strictly enforce the difference between intuitions and *empirical* concepts, a difference admitted by most. Significantly, their reliance on the imagination to legitimate the establishment of a para-conceptual synthesis is overplayed. Though true that Kant at one point declares "imagination… belongs to

[151] Sally Sedgwick, "McDowell's Hegelianism," in *European Journal of Philosophy* 5, no. 1 (April, 1997), 27.
[152] Ibid., 398.
[153] Ibid., 396.
[154] Robert Hanna, 'Kant and Nonconceptual Content' in *European Journal of Philosophy*13, no. 2 (July 2005), 249.

sensibility" (B151), this single episode cannot compete with the wealth of material bringing the imagination under the purview of the understanding. In Hannah Ginsborg's paper 'Was Kant a Nonconceptualist?' (2008), for instance, she asks us to consider two notes, appended to A120 and B160: in the first Kant states that imagination "is a necessary ingredient of perception itself," for "something more than the receptivity of impressions is required" to produce a unified manifold (A120n), and in the second Kant states that sensible unity "presupposes a synthesis, which does not belong to the senses but through which all the concepts of space and time become possible" (B160n). Hence Ginsborg claims that the imaginative synthesis is "implicated in the *having of* intuitions, both empirical and pure."[155] Moreover, though Kant seems to attribute to sensibility the power of imagination at B151, he directly contradicts this characterisation in a lengthy 'conceptualist' passage:

> but insofar as *its synthesis is still an exercise of spontaneity*, which is determining and not, like sense, merely determinable, and can thus determine the form of sense *a priori* in accordance with the unity of apperception, *the imagination is to this extent a faculty for determining the sensibility a priori*, and its synthesis of intuitions, in accordance with the categories, must be the transcendental synthesis of the imagination, *which is an effect of the understanding on sensibility* and its first application (and at the same time the ground of all others) to objects of the intuition that is possible for us (B151-152) (my italics).

Indeed, this passage not only straightforwardly places the power of imagination under the understanding, but the reason it does so is because *synthesis* is *spontaneous*, and as we clarified in our discussion of the B-edition TD, one of the most – if not the most – crucial distinguishing marks separating sensibility and understanding is that the former is passive while the latter is spontaneous (read: generative). Hence the nonconceptualist idea of a para-conceptual synthesis falls flat. Finally, if this argument weren't enough to convince one of the error of Allais et al's ways, one simply can't ignore the fact that even in the A-edition TD Kant explicitly ties the functioning of the transcendental imagination to *a priori rules*: "the affinity of all appearances (near or remote) is a necessary consequence of a synthesis in the imagination that is grounded *a priori* on rules" (A123). Intriguingly, Henry Allison is sympathetic to the component of the nonconceptualist argument which strongly affirms the separation of the imagination from sensibility and the understanding, accusing Strawson and Sellars both of 'over-intellectualising' the Kantian imagination. According to Allison the imagination can't even be described (*pace* Sellars) as "minimally conceptual," but must rather be understood as "proto-conceptual" – that is, "the imagination has the task of unifying the sensible data in a way that *makes*

[155]Hannah Ginsborg, 'Was Kant a Nonconceptualist?' in *Philosophical Studies: An Intentional Journal for Philosophy in the Analytic Tradition* 137, no. 1 (January 2008), 66.

possible its subsequent conceptualisation, without itself *being* a mode of conceptualisation."[156] However, even with that much admitted, still Allison cannot (nor does he wish to) conceive of an imaginative synthesis that is *not* rule-governed. Following in J. Michael Young's wake, Allison maintains that what separates the syntheses effected by the imagination and the syntheses effected directly by the understanding is "the sense that its *rule-governed interpretive activity* is not self-consciously performed, which is why it does not amount to cognition 'in the proper sense'."[157] For Allison and Young that is, unlike the synthesis effected directly by the understanding, the imaginative synthesis does not use empirical concepts to gather intuitions into judgments. Nevertheless, the imagination's synthesis is *certainly* guided by the demands of the pure concepts of the understanding. As we made clear earlier on, and as Kant will indicate in the sentences directly after his preceding quote – the understanding is "the faculty of rules" (A126), upon which "is grounded, therefore, all unity in the synthesis of the imagination" (A125) – any mention of *a priori* rules refers to the determining function of the categories of the understanding. Hence wherever synthesis occurs, whether of the imagination or otherwise, the categories are determinant factors.

A New Argument (Discursivity Trumps Finitude)

Thus, insofar as conceptually-oriented syntheses are necessary for the internal coherency of any kind of perceptual experience – no matter how trivial or basic – the role of the nonconceptual particular seems to have to come up short. Now, however, another nonconceptualist argument looms over the horizon. Jessica J. Williams notes:

> A growing number of interpreters, on the other hand, have appealed to Kant's characterisation of space as an infinite, all-encompassing whole that precedes its parts to argue that the unity of space *cannot* be a product of categorial synthesis, which has a part-whole priority.[158]

The most notable purveyor of this viewpoint is Colin McLear, whose article 'Two Kinds of Unity in the *Critique of Pure Reason*' (2015) is widely referenced amongst fellow nonconceptualists. It's to his argument we will now turn, to develop the logic of this second nonconceptualist position. Before we begin, however, a reminder: Kant favours a discussion of space in the Transcendental Aesthetic as opposed to time, as what applies to the former applies (for the most part) to the latter. Hence while the ensuing discussion pertains to both, references to 'space' will continue to predominate.

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[156] Allison, *Kant's Transcendental Idealism*, 187-188.
[157] Ibid., 189.
[158] Jessica J. Williams, 'Kant on the Original Synthesis of Understanding and Sensibility', in *British Journal for the History of Philosophy* 26, no. 1 (2018), 67-68.

McLear levels the same criticism at the McDowellian orthodoxy as his peers, writing that one cannot support the conceptualist "rereading of Kant's argument in the Transcendental Aesthetic without compromising central tenets of the critical philosophy."[159] Indeed McLear stresses above all that his intention is to defend the textual integrity of the *Critique*, and not, as the implication has it, to revise Kant's arguments in light of movements in contemporary philosophy.[160] In alignment with Allais and Hanna, McLear's goal is to combat a reading of the TD which "would seem to deny the possibility of any objective representation without the categories."[161] To achieve his purpose, McLear opens his paper with an intriguing conceptual manoeuvre: he circumvents the problematic status of synthesis all together. He states

we can distinguish two very general positions regarding the cognitive roles of sensibility and the understanding. Either sensibility, *independently of any synthesis*, furnishes the mind with objective representations (intuitions), or such objective representations depend, at least in part, on mental acts of synthesis.[162]

'Sensibilism' is the name McLear gives to the position that "sensibility may furnish the mind with at least some unsynthesised objective representations," whereas the second position – that "all objective representation requires synthesis" – is named 'Intellectualism'.[163] In supporting a Sensibilist reading of Kant's *Critique*, McLear rejects the nonconceptualist claim to para-conceptual syntheses, but in so doing, he immediately provokes censure from another sector. For as we detailed above, Kant's argument for the necessity of *a priori* syntheses is due to his understanding of the unity of experience, including the unity of the manifold of intuition. If McLear wishes to circumvent the problem of conceptually-oriented syntheses, he will have to deal with this issue. McLear's solution is to distinguish between sensible unity and conceptual unity as different kinds: "I articulate two distinct ways in which a representation may possess unity. One is aesthetic and given via sensibility. The other is discursive and generated by the understanding."[164] In order to insist on this distinction, McLear brings the reader back to the Aesthetic's central claims, outlined in the Metaphysical Exposition, "that space and time are *a priori*

[159] McLear, 'Two Kinds of Unity', 81.
[160] "In what follows, I shall consider these arguments, not as to their soundness or validity, but rather as to what they indicate about Kant's views concerning the cognitive nature of the faculties of sensibility and understanding." (Ibid, 86)
[161] Ibid., 80.
[162] Ibid., 81. My italics.
[163] Ibid.
[164] Ibid., 82.

representations. For our purposes, the interesting characteristic of these representational forms is that we grasp them wholly non-discursively."[165] That is, the crux of McLear's argument rests in the fact that – as he sees it – Kant attributes to the pure intuitions a unity that is expressly not conceptual. Insofar as all syntheses are conceptually-oriented, McLear holds that space and time must possess a sensible (pre-categorial) unity. In particular, the thesis that McLear wishes to focus on is Kant's insistence that space and time are "singular and infinite given wholes."[166] If one needs reminding yet again, Kant argued that space and time had to be *a priori* intuitions because we receive them as infinite given magnitudes, which is to say that every 'part' (every moment, every place) one encounters is only a local manifestation of a singular, endless continuum. Arthur Collins puts it simply: "There is just one space in which all outer things are located."[167]

Remember: Kant developed four arguments in the Metaphysical Exposition, two of which supported the claim that spatio-temporality is *a priori*, and the other two supported the claim that spatio-temporality is nonconceptual. Earlier in the text we referred to the latter as the 'Universal Dimension' thesis. Let's remind ourselves of its arguments (focusing on the B-edition):

The *Part-Whole Argument*: "one can only represent a single space, and if one speaks of many spaces, one understands by that only part of one and the same unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are only thought in it. It is essentially single…" (A25/B39)

The *Infinite Argument*: "Space is represented as an infinite given magnitude. Now one must, to be sure, think of every concept as a representation that is contained in an infinite set of different possible representations (as their common mark), which thus contains these under itself; but no concept, as such, can be thought as if it contained an infinite set of representations within itself. Nevertheless space is so thought (for all the parts of space, even to infinity, are simultaneous) (A25/B39-40)."

Though separate, these arguments are ordered such that the latter builds upon the former. According to McLear's reading, the *PWA* states that, unlike conceptual unities which construct wholes out of parts, all parts of space and time are limitations on the whole (the whole pre-exists the parts). The *IA* states that, unlike conceptual infinities which consist of parts *under* one another, space and time are infinities which

[165] Ibid., 86.
[166] Ibid.
[167] Arthur Collins, *Possible Experience: Understanding Kant's Critique of Pure Reason* (Berkeley: University of California Press, 1999), 98.

contain all parts together. Thus most of the heavy lifting is done by the first argument; what the second argument does is amplify the consequences of the first in order to preclude the possibility that intuitions are the same kind of representation as concepts. That is, the *PWA* promotes a mereological distinction (it posits two underlying structural relations) between concepts and intuitions, and the *IA* clarifies the consequences of this distinction by adding infinity to it. For McLear, the combination of Kant's arguments is sufficiently momentous, that not only does it amount to proof that intuitions are different to concepts (which almost all but the most vociferous of conceptualists would agree to), but indeed it amounts to proof of Kant's commitment to there being two kinds of transcendental representational *unity*. According to McLear, after all, if one understands unity exclusively as the result of an activity of the intellect, one simply cannot make sense of Kant's argument in the Metaphysical Exposition: "This view entails that our conception of space as an infinite whole would be logically constructed from our grasp of the discrete spaces composing it (whether these spaces are perceived or mathematically grasped)."[168] To be succinct, McLear emphasises that the *kind* of infinity represented in spatio-temporality (the whole, and not the sequence of parts) is incompatible with conceptual determination, whether pure or otherwise. Insofar as the infinite whole is given, it must then be given as a whole purely sensibly, without conceptual involvement. "We grasp the whole of space first, and it is in virtue of this that its parts, as limitations of the infinite whole, are conceptually grasped and cognized discursively."[169]

Clearly, one way to attack McLear's position is simply to say 'it doesn't work'. That is, one ignores the difficulties inherent in the Metaphysical Exposition in favour of the (salient) fact that Kant stipulates time and again that all unity is the result of a conceptually-oriented synthesis.[170] But this line of argument, though perfectly justified, does not address McLear's position directly. Despite the fact that I take it to be ultimately incoherent – there is no unity without synthesis, and no synthesis without concepts – his thought expresses an anxiety about the Universal Dimension thesis that one cannot deny to be apt, if only to the degree that it attracts confusion. What does Kant really *mean* by an infinite given magnitude? The précis we delivered in our own analysis of the Aesthetic doesn't solve this issue, and it

[168] McLear, 'Two Kinds of Unity', 88.
[169] Ibid.
[170] Though we have demonstrated that this is the case in our elaboration of Kant's Transcendental Deduction, it can't hurt to remind ourselves of some choice quotes: "in order for unity of intuition to come from this manifold (as, say, in the representation of space), it is necessary first to run through and then take together this manifoldness, which action I call the synthesis of apprehension" (A99); "Combination does not lie in the objects, however, and cannot as it were be borrowed from them through perception and by that means first taken up into the understanding, but is rather only an operation of the understanding" (B135); and "Apperception and its synthetic unity… [are] the source of all combination, [and apply] to all sensible intuition of objects in general, to the manifold of intuitions in general, under the name of the categories" (B154).

is important, especially in light of the topic that is our theme: the nature of the cognitive finitude in the opening chapters of Kant's *Critique of Pure Reason*. After all, according to McLear's Kant we have the means to be given a non-intellectual infinity. In order to address this anxiety directly, the best strategy would be to analyse the meaning of infinity for Kant – we'll begin with the central feature of the second argument (the *IA*) of the Universal Dimension thesis and work backwards. Once this hermeneutic has been accomplished, what remains ought to be easily integrated within the parameters of the B Deduction TD, and especially with the help of the transcendental synthesis of the imagination, the activity of which McLear ignores completely. Normally, one associates discussions of Kant and infinity with the Transcendental Dialectic, and more specifically, with discussions pertaining to the First and Second Antinomies. However, insofar as our aim is to analyse the meaning of cognitive finitude vis-à-vis the opening chapters, to draw now upon the Antinomies hardly seems sporting. More importantly it is not necessary, for Kant employs the term 'infinity' in both the Aesthetic and the Metaphysical Deduction, and both episodes are sufficiently meaningful to indicate an interpretation of Kant that is charitable to his project while also meeting the anxiety expressed by McLear. Before we analyse these episodes, however, a critical distinction must be made.

The distinction that must be made pertains to the term 'infinity'. What is it, and what does it mean? Few living philosophers are better able to approach an answer to that question than the Oxford scholar Adrian Moore. In 1990 Moore published a book on this subject, and prefaced his exegesis with the following: "My aim, in general terms, is to make sense of the infinite. I draw on what western philosophers have thought about the infinite ever since they first began to pay it attention some two and a half thousand years ago."[171] What follows is an in-depth historical survey of various mathematical and philosophical theories of the infinite, beginning with the pre-Socratics and coming to a close with Wittgenstein. Despite the diversity of the thinkers across the millennia, Moore identifies the fact that, when it comes to a definition of infinity, "[t]wo clusters of concepts nevertheless dominate."[172]

> Within the first cluster we find: boundlessness; endlessness; unlimitedness; immeasurability; eternity; that which is such that, given any determinate part of it, there is always more to come; that which is greater than any assignable quantity. Within the second cluster we find: completeness; wholeness; unity; universality; absoluteness; perfection; self-sufficiency; autonomy. The concepts in the first cluster are more negative and convey a sense of potentiality… The concepts in the second cluster are more positive and convey a sense of actuality.[173]

[171] A. W. Moore, *The Infinite* (London: Routledge, 2001), xxi.
[172] Moore, *The Infinite*, 1.
[173] Ibid., 1-2.

Clearly Moore is drawing upon Aristotle's discussion of potential and actual infinity to construct his division, demonstrating that Aristotle's exegesis of infinity in the *Physics* is still deeply relevant to this day. As Moore writes: "Many of the concepts that have shaped and informed subsequent discussion, indeed much of what has actually been discussed, originated with Aristotle."[174] Nevertheless, while Aristotle denies actual infinity in favour of the potential, Moore does not favour one 'constellation' over another – his goal is analysis, not judgment. We can summarise the fruits of Moore's distinction thus: on the one hand there is *endless* infinity, and on the other hand *total* infinity. According to Colin McLear, Kant's discussion of space as an infinite given magnitude belongs to the latter, insofar as the sensible infinite is presented holistically:

> Kant suggests… in the above quotations from the Metaphysical Exposition, that our cognitive grasp of space is holistic. We grasp the whole of space first, and it is in virtue of this that its parts, as limitations of the infinite whole, are conceptually grasped and cognised discursively.[175]

That understood, let's now proceed to unpacking Kant's alternate uses of the term 'infinity' in the opening chapters of the *Critique*.

Infinite Judgment (the Metaphysical Deduction)

We turn to Kant's use of the term 'infinity' in the Metaphysical Deduction first, because it is less complicated than his contrastive use of the term in the Transcendental Aesthetic. Little has been written on infinite judgments, despite how intriguing Kant's use of the adjective is. This may be because Kant admits that, like singular judgment under Quantity, the class of infinite judgment doesn't *strictly* belong to general pure logic (A72/B97). That he includes them in the table nonetheless is baffling, despite the use to which he puts their correspondents in the categories. Of course it's precisely in service of the latter that he does include them, and some commentators, like Longuenesse, charitably assent: "those two forms do belong in a table geared toward laying out the ways in which our understanding comes up with knowledge of objects."[176] Arthur Lovejoy also spends time on this subject and writes, almost admiringly, that "Kant is perhaps the first logician in history to conceive of a class of judgments neither affirmative nor negative, yet to be classified along with these by the same criterion of quality."[177] To explain the use of this concept, let's follow Kant's explanation. Considering his own example of an

[174] Ibid., 34.
[175] McLear, 'Two Kinds of Unity', 88.
[176] Longuenesse, 'Kant on *a priori* concepts', 143.
[177] Arthur Lovejoy, 'Kant's Classification of the Forms of Judgment' in *The Philosophical Review* 16, no. 6 (November, 1907), 594.

infinite judgment, 'the soul is non-mortal', Kant makes two significant assertions. First, he claims that his proposition is *affirmative* insofar as it has "placed the soul within the unlimited domain [*unbeschränkten Umfang*] of undying beings" (A72/B97). Kant's idea is that the judgment 'the soul is non-mortal' cleaves reality into two categories – the domain of mortal beings (the dying) and the domain of immortal beings (the undying) – and affirms that the subject belong to the latter. Kant goes on to say that

> since that which is mortal contains one part of the whole domain of possible beings, but that which is undying the other, nothing is said by my proposition but that the soul is one of the infinite multitude [*unendlichen Menge*] of things that remain if I take away everything that is mortal (ibid.).

Thus Kant holds that the total "infinite sphere of the possible," which is the totality containing both dying and undying things, becomes "limited" by an infinite judgment "only to the extent that that which is mortal is separated from it, and the soul is placed in the remaining space of its domain" (A72/B97-98). This leads to Kant's second significant assertion, namely, that even though one domain has been separated by the judgment from the infinite sphere of the possible (in Kant's example, the domain of the undying), "this space still remains infinite, and more parts could be taken away from it without the concept of the soul growing in the least and being affirmatively determined" (A72-73/B98). That is, though subtracted from an infinite totality of things (both dying and undying things), the domain of undying things within which the soul has been placed is sufficiently indeterminate as to still count as infinite. The predicate's denotation is so vast as to be essentially empty, only conveying the minimum amount of information: therein lies the *negative* component of the infinite judgment, for what is asserted about the subject is only what it is *not*. Indeed, Kant says you could form further infinite judgments about the soul (that it is irrational say, or immaterial), and the concept would retain the same level of indeterminacy – it would not 'grow' at all. Thus in Kant's words, the "infinite judgment is merely limiting with regard to the content of cognition in general" (A73/B98).

What are we to make of Kant's description of infinite judgments? Clearly their status as separate from affirmative and negative judgments is problematic. Remember: "in affirmatives the property expressed by the predicate is *attributed* to certain objects, whereas in negatives the property is *denied* of them."[178] According to one perspective then, an infinite judgment is indistinguishable from an affirmative: both assert a positive relationship between subject and predicate. Formally speaking, 'the soul is non-mortal' does the same job as the affirmative 'the example is tedious'. Indeed, this is precisely the reason why Kant admits infinite judgments shouldn't strictly be included in general logic! Moreover,

[178] Mark Siebel, 'Kant on Infinite and Negative Judgments: Three Interpretations, Six Tests, No Clear Result' in *Topoi*, Online First Edition (2017). https://link.springer.com/article/10.1007/s11245-017-9476-6

if the former could be said to convey something differently to the latter, it does so on the basis of a negative predicate – but then why isn't an affirmative proposition with a negative subject also an instance of an infinite judgment, e.g. 'unwelcome guests are tiring'?[179] That said, there seems to be an equal argument for the subsumption of infinite judgments into negatives. After all, whether one says 'the soul is non-mortal' or 'the soul isn't mortal', the meaning one conveys in either case is that a certain object called the soul does not belong to the class of objects which are mortal. Bennett says that the distinction is "uncharacteristic of Kant," insofar as infinite and negative judgments "do the same work in almost the same way" and only "differ in a minor verbal detail."[180] Given that both sides proffer persuasive arguments, perhaps it's understandable that Kant held infinite judgments to be something separate from (though overlapping with) both affirmatives and negatives. And in particular, Mark Siebel makes one cogent argument for the differentiation of infinite and negative judgments, *pace* Bennett. Taking his cue from C. S. Pierce, Siebel claims that Kant abided by the logic of what one would today call 'existential import', which is to say the stance that affirmatives imply the existence of their subjects while negatives do not.[181] Indeed Siebel affirms that this thesis –"affirmatives are false if the subject is empty while negatives are true in this case"[182] – is traceable as far back as William of Ockham's *Summae logicae* (c. 1323). If one understands Kant in this light, then the Kantian infinite judgment 'dragons are immortal' is false whereas the negative judgment 'dragons aren't mortal' is true, insofar as the former implies that dragons exist whereas the latter does not. Thus infinite judgments can be said to convey different information than negatives.

Either way, this is not our focus. Our focus is on the meaning that attaches to Kant's use of the concept of infinity. Our position is that the concept's use amounts to a claim about indefinite applicability: a determinate concept could be applied to a *potentially* limitlessness number of cases. Let's spell this out. An infinite judgment is so called because, according to Kant, the predicate positions the subject into an infinite category, e.g. the category of non-mortal things. As before, our question is in what sense is this category infinite? We have three points to consider. First of all, Kant's vocabulary points us in the direction that by infinite he means indefinitely extendable. As we quoted above, he

[179] According to G. F. Meier, whose textbooks on logic were very influential on Kant, an infinite judgment can result from the affirmative of either a negative subject or predicate. See §294 in his *Excerpt from the Doctrine of Reason* (London: Bloomsbury, 2016).
[180] Bennett, *Kant's Analytic*, 78.
[181] See C. S. Pierce's entry 'Limitative' in *Dictionary of Philosophy and Psychology Vol.* 2, ed. James M. Baldwin (New York: The MacMillan Company, 1902), 6-7.
[182] Siebel, 'Kant on Infinite and Negative Judgments', 4.

emphasises that the totality of dying and undying things (which is greater than the domain of undying things specified by the infinite judgment) has an infinite extension only in the sense that it is "possible." This word is repeated with respect to the extension of the domains of dying and undying things taken separately: "that which is mortal contains one part of the whole domain of possible beings, but that which is undying the other." Secondly, to accord to the negative predicate an actual infinite extension – whatever that might mean – would lead to a specific absurdity. For Kant asserts that it's the *form* of the judgment that necessarily results in an infinite extension: that is, Kant's argument is that 'S is non-P' positions S into an infinite domain. As Lovejoy notes, however:

> If I divide mankind dichotomously into the two classes of those over two feet tall, and those not over two feet tall – or all beings into temporal and non-temporal – there is no reason to think that the extension of my negative genus is in either case greater than that of its positive counterpart.[183]

As a result, Lovejoy concludes that it's only inasmuch as "their *possible* extension goes, both genera seem to be infinite, or indefinite."[184] Thirdly, it must be noted that Kant's reference to infinity in the context of the table does not begin with the infinite judgment. He initially refers to the concept of infinity *apropos* judgments of Quantity. Kant writes that if we compare singular judgments "with a generally valid one" – by which he means a universal judgment – "then the former relates to the latter as unity relates to infinity, and is therefore in itself essentially different from the latter" (A71/B97). That is, the concept of infinity is associated with universal judgments because they pertain in every case, or put alternately, they pertain to a totality of identical cases. I say 'associated' and not 'equated', because clearly Kant does not accord to universal judgments the rubric of infinity – this he saves for cases whereby a negative is affirmed, or put alternately, where a subject is placed into a limited class that is nevertheless indefinitely extended. Hence Kant explicitly equates the concept of infinity in the context of the forms of judgment with the indeterminate, unlimited and indefinite. Kant's use of the term clearly belongs to the cluster of concepts surrounding Moore's notion of *endless* infinity. That said, let's proceed to the next instance of Kant's use of the term.

Conceptual Infinity (the Aesthetic)

The nonconceptualists are eager to discuss Kant's claim in the Aesthetic concerning the infinity of space (and time). However Kant applies the concept of infinity to two types of representation in order to make his point: he contrasts the infinity *of the manifold of space and time* with the infinity *of concepts*. We will

[183] Lovejoy, 'Kant's Classification of the Forms of Judgment', 596.
[184] Ibid.

contemplate the latter in the hope that it will illuminate the former, and as we do so we will clarify a small ambiguity that arises in the commentary on this point. Remember: while Kant stipulates that "no concept, as such, can be thought as if it contained an infinite set of representations within itself," he does allow one to think "of every concept as a representation that is contained in an infinite set of different possible representations (as their common mark), which thus contains these under itself" (A25/B40). To put this another way, Kant denies a concept can *hold* an infinite set of representations, but permits somehow that an infinite set can *fall under* a concept. Clearly, in order to discuss the viability of the latter we must exempt ourselves from, for the time being, the usual difficulties that arise when contemplating an infinite task (like the law of entropy).[185] Our purpose is to speak only of the logical mechanism that determines a concept's relation to an infinite set of representations in the positive sense. Using Allison's phrase, we will describe the latter as the concept's capacity for "extensional ordering,"[186] which is to say that Kant allows for a concept to have an infinite extensional order.

Two conceptions of what the infinity of the extensional order consists in have arisen in the secondary literature. On the one hand, according to Allison, a concept can have "an infinite or, better, an indefinite number of concepts falling under it."[187] For instance, the concept 'object' can divided into the subordinate concepts 'material object' and 'mental object', the latter of which can be divided into 'psychological object', 'spiritual object' or 'mathematical object', and the latter of which can again be divided into 'set', 'equation', 'number', 'function', and so on. Allison's point is just that "the search for subordinate concepts can be pursued ad infinitum"[188] – one concept can lead to an indefinite number of other concepts. On the other hand, Sebastian Gardner interprets the idea that a concept has an infinite extensional order to mean that it has "an infinite number of possible instances."[189] Lorne Falkenstein, for whom Kant's claim is that a concept "can have an infinite number of instances and, in this sense, contain an infinity *under* itself," mirrors Gardner.[190] According to the latter interpretation, a concept possesses an infinite extensional order only insofar as it can *apply to* an infinite number of objects. To sharpen the point of this analysis, we can say that Allison takes infinite extensional ordering to pertain

[185] For an incredibly concise discussion of this subject, see Fred Dretske's 'Counting to Infinity' in *Analysis* 25, no. 3 (January, 1965): 99-101.
[186] Allison, *Kant's Transcendental Idealism*, 111.
[187] Ibid.
[188] Ibid.
[189] Gardner, *Kant and the Critique of Pure Reason*, 79.
[190] Falkenstein, *Kant's Intuitionism*, 239.

between concepts, whereas Gardner-Falkenstein take infinite extensional ordering to pertain *between a concept and its objects*.

To our mind, the latter is superior to the former conception of extensional ordering. Though this is a detour, let's spend a moment unpacking why. For Allison, the manner in which a subordinate concept comes to be related to a general concept in extensional ordering is "by adding differentia."[191] Using his examples, 'animal' and 'vegetable' are thus subordinate to the concept 'animate body', which along with 'inanimate body' is in turn subordinate to the concept 'physical body'. We can see this relationship visualised in the following figure:

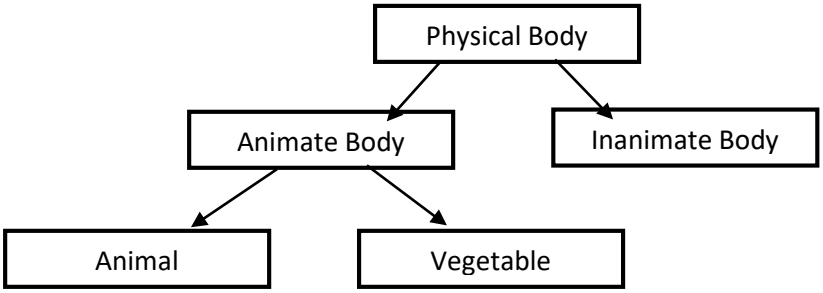

Figure 1

The extensional ordering of the concept is contrasted by Allison with its intensional ordering, and the latter is correlated with what a concept *contains*. Thus while Kant permits infinite extensional ordering, he explicitly *rejects* infinite intensional ordering. Now what is this intensional ordering? According to Allison, intensional "ordering is the reverse of extensional ordering, since the lower or more specific concepts contain the higher or more general ones within themselves."[192] That is to say, the concept of 'animal' contains 'animate body', which in turn contains 'physical body' in an intensional order. "In short, there is an inverse correlation between the extension and the intension of a concept. The smaller the extension, the richer the intension, and vice versa."[193] We can see this relationship visualised in the following figure:

[191] Allison, *Kant's Transcendental Idealism*, 111.
[192] Ibid.
[193] Ibid.

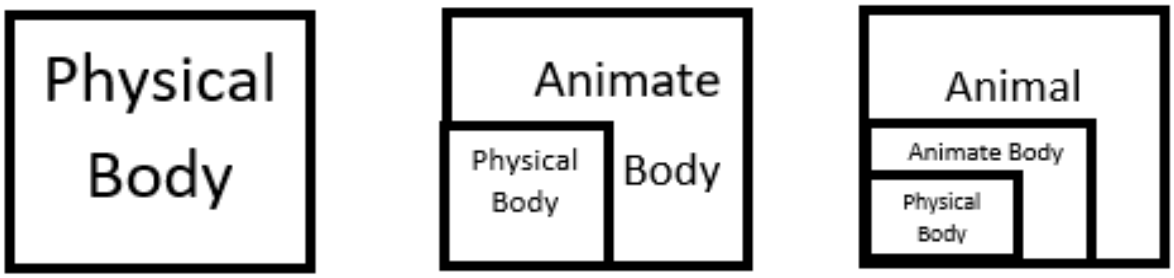

Figure 2

As one can see, the three boxes demonstrate the difference between an intensionally rich concept (far right) and an intensionally bare concept (far left). According to Allison's analysis, Kant's last argument turns upon the denial that a concept can be infinitely rich in its intensional order: "A concept cannot have an infinitely rich intension… because such a 'concept' would lose its discursive character."[194] Thus Allison comes to the same conclusion as Gardner and Falkenstein, which aligns with Kant's initial edict that a concept cannot *contain* "an infinite set of representations within itself." The obstacle to accepting Allison's interpretation is this: the relation between a general concept and its subordinate concepts is too similar to the relation between a concept and its significations, inasmuch as it is precisely Kant's point that the latter cannot be infinite. To spell this out, one must recognise that by construing extensional ordering in terms of an intra-conceptual relation (i.e. the relation between general and subordinate concepts), Allison forces himself into a position whereby the concept's permitted relationship with limitlessness (i.e. extension) is the inverse of the concept's prohibited relationship with limitlessness (i.e. intension). In Gardner and Falkenstein's model, extensional ordering is quite separate from intensional ordering. By their account, the latter only determines what can count as a candidate for the application of the former. We can see the relationship between the two visualised in the following figures, where the first describes the intensional order and the second describes the extensional order:

[194] Ibid.

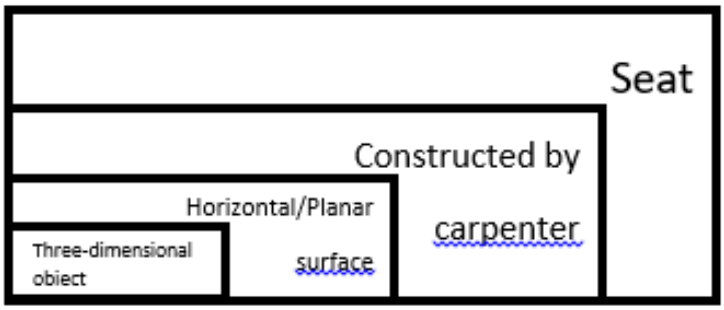

Figure 3

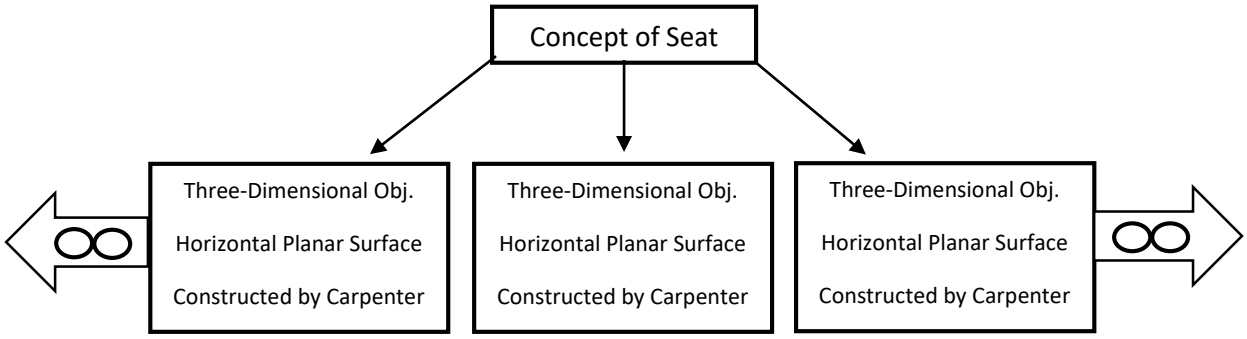

Figure 4

On the Gardner-Falkenstein account, the intensional order merely provides *guidance* for the extensional order. The components of a concept (what is contained in it) are significations, which in turn act as criteria to be fulfilled in order for the objects (what fall under the concept) to have the concept applied to them. In this interpretation, the magnitude of the intensional set has nothing to do with the magnitude of the extensional set, and it is precisely in this sense that Allison's model invites calamity. For on Allison's account the intensional and extensional orders *directly determine* one another. Insofar as they are in direct relation, the consequence of allowing infinity into one order is tantamount to allowing into the other. The fact that the direct relation is inverted matters little when it comes to an infinite magnitude: dividing one by infinity only produces infinity again. Thus the Gardner-Falkenstein account is superior to Allison's.

Arbitration complete, it is clear from our analyses that – whichever interpretation one promotes – the kind of infinity that Kant attributes to conceptuality belongs to the cluster of concepts surrounding Moore's notion of *endless* infinity. That is, whether one conceives of a concept's extensional magnitude in terms of its applicability to objects which meet the criteria established by its significations (Gardner-Falkenstein), or in terms of the set of subordinate concepts from which it is differentiated (Allison), the

extensional order of a concept is indefinitely extended, such that the set to which the concept (of infinity) is applied is only potentially infinite. Allison describes its infinity as 'indefinite', and states that Kant is only committed "to the view that the search for subordinate concepts can be pursued ad infinitum," which is equivalent to saying without end.[195] Gardner and Falkenstein are no less clear, as its unimaginable that the range of a concept's applicability to objects is anything other than *potentially* infinite. If that weren't enough to carry the argument, Kant says himself that the concept's extensional order pertains to "an infinite set of different *possible* representations" (B40).

An Infinite Whole

At the close of our textual analyses, what have we revealed? The conclusion we draw is that, in the opening chapters of the *Critique*, Kant uses the word 'infinity' in *only* one sense: to denote endlessness. That is, for every unit populating the collection to which he appends this term, his contention is that another unit can be found – for every object that fulfils the criteria necessary to have the concept of 'table' applied to it, another object that matches those criteria is also possible, and for every subject that is predicable as non-mortal, another subject could also be so predicated. The idea that these 'collections', insofar as they are infinite, could be in some sense *total* or *whole* is meaningless. And yet, when Kant applies the same concept to the forms of our sensible intuition, McLear insists that Kant is stating we are given infinite spatio-temporal wholes. From a purely textual viewpoint, this seems unreasonable.

In the face of the above, one imagines that McLear would substantiate his holistic take on the spatio-temporal infinite by referring to the *PWA*. The terms of this latter argument revolve around the distinction between parts and wholes, and the different ways in which the understanding and sensibility organise these elements. One must remember that Kant stipulates that, in the case of concepts, the parts build up to a whole, whereas in the case of spatial or temporal intuitions, the parts are limitations of the whole. It is not an exaggeration to say that this distinction stands at the heart of McLear's nonconceptualist position. But let us remind ourselves one last time of what Kant's argument in the Metaphysical Exposition is:

> one can only represent a single space, and if one speaks of many spaces, one understands by that only parts of one and the same unique space. And these parts cannot as it were precede the single all-encompassing space as its components (from which its composition would be possible), but rather are only thought in it. It is essentially single… (A25/B39).

[195] Ibid.

Now isn't there another way of viewing the content of this passage than the one traditionally assumed? Earlier on we described the *PWA* as promoting a mereological distinction, for mereology just is the study of part-whole relationships. This is certainly the interpretation that Colin McLear (and many others) give to Kant's passage, and it seems at first to be entirely apt. However, once a claim to part-hood has been made, a corollary claim upon the presence of a whole is now incumbent, and it is precisely the claim to the wholeness of space which presents us with a difficulty. As Giorgio Lando asserts in his *Mereology: A Philosophical Introduction* (2017), "Parthood is a *binary* relation: it is not a property had by a single thing. When I make a parthood claim, I indicate an *x* that is the part (the *relatum*) and a *y* that is the whole (the second *relatum*)."[196] Thus rather than conceive of space mereologically, why don't we take Kant's passage *logically*? That is, the point that Kant's 'it is essentially single' remark makes is simply that, for every instance of what one might call 'local space' (a bedroom, for example), the qualities that make it space – its spatial character – are *identical* to any other instance. That is, whether one should walk into a bathroom, up a mountain, or swim in the ocean, every location exhibits the same spatial characteristics. Divested of all the particularities that cling to an intuition, whether it be the temperature, size or colour of the space, its character as *spatial* (its being-space) never changes. After all, 'space' is not the same as 'size'. A toy-car and a real car are very different sizes, but is one any less spatial than the other? The same rule applies to moments in time: though instants proliferate and include within their proliferation the greatest diversity of events imaginable, their temporal character doesn't change. One moment is identical to the next, when considered exclusively from the point of view of their temporality, just as one location is identical to the next, when considered exclusively from the point of view of their spatiality. Given this logical relation of identity between moments in time or regions in space, what need has one for imagining a whole? If one wanted to translate this point into a mereological language (which would be disingenuous, given our aversion to the whole), Kant's claim amounts to the assertion that, unlike concepts where the parts are distinct from one another (different conceptual characters), the parts in space and time are all the same. Of course there is a cumulative effect: the more 'spaces' I encounter, the more 'space' I am aware of. But there is nothing inherent in this cumulative effect that leads me to claim by necessity that I am given a transcendental totality from which all pieces, intuited or not, are gathered. Thus, if one treats Kant's distinction between concepts and intuitions logically rather than mereologically, and if one takes Kant's application of the term 'infinite' to be consistent across the opening chapters of the *Critique*, the anxiety expressed by McLear

[196] Giogrio Lando, *Mereology: A Philosophical Introduction* (London: Bloomsbury Academic, 2017), 21.

disappears. Kant does not allow for an infinite spatial or temporal whole given as pure intuition. Rather, spatio-temporality is differentiated from conceptuality by emphasising its internal identity over its internal distinctiveness, and then it is affirmed that, though our encounter will always involve determinate boundaries, the boundaries of the spatio-temporal as such are indeterminate and unlimited.

Part VI

Conclusion

The *Critique* provides a rigorous model of cognitive finitude. This finitude is composed

Abbreviations of Immanuel Kant's texts

I follow the standard (Ax/Bx) annotation for Kant's *Critique*. Source text is: *Critique of Pure Reason*, translated by Paul Guyer and Allen Wood. Cambridge: Cambridge University Press, 1998.

P – *Prolegomena To Any Future Metaphysics*, translated and edited by Gary Hatfield. Cambridge: Cambridge University Press, 2004.

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